21983

National Library of Canada
Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE

THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/*NOM DE L'AUTEUR* W. H. STEWART

TITLE OF THESIS/*TITRE DE LA THÈSE* TEAM BUILDING UTILIZING PROCESS TRAINING: ITS EFFECT UPON TEAM PRODUCTIVITY

UNIVERSITY/*UNIVERSITÉ* UNIVERSITY OF ALBERTA

DEGREE FOR WHICH THESIS WAS PRESENTED/ *GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE* Ph.D.

YEAR THIS DEGREE CONFERRED/*ANNÉE D'OBTENTION DE CE DEGRÉ* 1974

NAME OF SUPERVISOR/*NOM DU DIRECTEUR DE THÈSE* DR. H.W. ZINGLE

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/*DATÉ* June 25/74 SIGNED/*SIGNÉ* W.H. Stewart

PERMANENT ADDRESS/*RÉSIDENCE FIXÉ*
11911 - 41 A. AVE.,
EDMONTON, ALTA

THE UNIVERSITY OF ALBERTA

TEAM BUILDING UTILIZING PROCESS TRAINING: ITS EFFECT UPON TEAM PRODUCTIVITY

by

© WILLIAM HOWARD STEWART

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF DOCTOR OF PHILOSOPHY
IN
COUNSELLING PSYCHOLOGY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA
FALL, 1974

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Team Building Utilizing Process Training: Its Effect Upon Team Productivity submitted by William Howard Stewart in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Counselling Psychology.

. . . .
Supervisor

R. G. McIntosh
. . . .

R. V. Rasmussen
. . . .

. . . .

. . . .
External Examiner

Date April 2, 1974

ABSTRACT

The central purpose of this research was to assess the impact of an Organization Development technique, team building, upon team productivity.

A total of 259 undergraduate-university students were randomly assigned to five-man teams, and these teams were, in turn, randomly assigned to one of the following training conditions.

1. Structured Feedback: Teams in this condition utilized questionnaires to assess their team processes (e.g. communication, decision-making) and on the basis of the information so collected, made specific plans to improve their team functioning.
2. Unstructured Feedback: These teams also problem-solved their team functioning; however, they did not utilize formal survey instruments as diagnostic tools.
3. No Feedback: These teams did not analyze their team processes or functioning and constituted the experimental control condition.

Team productivity was assessed, before, during, and after the training period, utilizing discussion, productivity, and problem-solving tasks.

No significant differences were found between teams from the three training conditions on any of the following dimensions.

1. Productivity of intact teams
2. Productivity of ad hoc teams (temporary groupings of individuals who did not have prior team experience together).

3. Team cohesiveness

4. Within team communications

Possible reasons for the failure of this research to have any of its hypotheses confirmed were discussed; and suggestions on how to improve the experiment itself and increase the generalizability of its findings to real-life teams were noted. In this discussion, the need for the development of a series of team tasks, in which a team's performance directly reflects the quality of its processes, was underscored.

Data from comparison teams which did some of the same tasks as the experimental teams were interpreted as providing slight encouragement to those who utilize training in interpersonal communication, problem solving, and process awareness as part of their team-building activities.

ACKNOWLEDGMENT

To the many people who directly contributed to the completion of this thesis, I wish to express my sincere thanks.

In particular, I wish to recognize the contribution of Dr. Ray Rasmussen who played a central role in this project from its inception right through to its completion. He effectively combined the roles of advisor, colleague and friend and, together with Mr. Gary Ford, conducted the experimental training.

Special thanks are also due to Dr. Dallas Cullen, Mr. Ray Baril, Mrs. Doreen Smyth and Mrs. Elaine Carswell for their cheerful assistance.

The help and thoughtful comments of the members of the thesis committee were likewise deeply appreciated.

I also wish to thank those who indirectly, through the provision of motivation, support, and encouragement, contributed to this project.

Dr. Duncan Campbell has, over a period of years, strongly encouraged me to complete this work and while I have not always thanked him at the time, I do sincerely do so now.

I also wish to express my appreciation to Dr. John Wallen who has, for several years, unknowingly served as a major source of inspiration to me.

Finally, I wish to thank my friends, and especially my family, Glenda, Greg, and Tracy for the support and encouragement which they gave through both the clear and troubled sailing which was encountered during the course of this project.

TABLE OF CONTENTS

CHAPTER PAGE

I. INTRODUCTION 1

Purpose of this Study 2

II. THEORY AND RELATED RESEARCH 4

O.D. Research 5

Team-Building Theory and Models 9

Action Research Model 9

Grid Model 10

Rational Model 10

Consultantless Team-Training Model 10

Training Model 11

Process Consultation Model 12

Field Research on Team Building 13

Team Building and T-groups 14

Type of Team Building 15

Team Building and Team Productivity 19

Laboratory Research on Team Building 23

Summary 26

III. ISSUES RAISED BY THE EXPERIMENTAL RESEARCH 28

Training 28

Structured versus unstructured feedback 31

Openness 32

Communication 34

Problem solving 34

CHAPTER PAGE

Summary 35

Measures of Productivity 35

Cohesiveness 37

Summary 39

IV. DEFINITIONS, RATIONALE AND HYPOTHESES 40

Feedback Types 40

Team Norms 42

Openness 42

Cohesiveness 44

Summary of Hypotheses to be Tested 45

V. EXPERIMENTAL DESIGN 47

Sample 47

Procedure 48

Communication Training 50

Receiving skills -- learning objectives 52

Sending skills -- learning objectives 52

Team Building 53

Structured feedback 54

Unstructured feedback 55

No feedback 55

Tasks 55

Cohesiveness Measure 58

Internal Criteria Measurements 58

Personal and Task Openness 59

Statistical Procedures 60

Pretest Measures 61

CHAPTER PAGE

Training Task Measures 61

Post-Test Measures 62

VI. RESULTS 64

Pretest Productivity Results 64

Summary of Conclusions Based on Pretest Data 67

Training Tasks 67

Post-Test Measures 71

Hypothesis I 71

Hypothesis II 77

Hypothesis III 79

Hypothesis IV 80

Internal Criteria Measures 81

Summary of Results 85

VII. DISCUSSION OF RESULTS 89

Comparison Teams 89

Weaknesses of the Study 92

Study Population 92

Training 93

Student Motivation 94

Tasks 95

Suggestions for Further Research 96

* * *

BIBLIOGRAPHY 99

PAGE

APPENDIX A. O.D. INTERVENTIONS 108

APPENDIX B. BLAKE AND MOUTON'S GRID O.D. 110

APPENDIX C. CONTRAST OF T-GROUPS AND TEAM DEVELOPMENT 114

APPENDIX D. COMMUNICATION TRAINING EXERCISES AND HANDOUTS 116

APPENDIX E. THE UNIVERSITY OF ALBERTA, FACULTY OF BUSINESS ADMINISTRATION AND COMMERCE, ORGANIZATION THEORY 303, COURSE OVERVIEW 202

APPENDIX F. PRETEST, TRAINING, AND POST-TEST TASKS 208

APPENDIX G. TERM PAPER 309

APPENDIX H. SURVEY INSTRUMENTS USED BY COMPARISON TEAMS . . . 313

APPENDIX I. POST-TEST SURVEY 322

APPENDIX J. TAPE SCORING CATEGORIES 331

APPENDIX K. PRETEST SURVEY 334

APPENDIX L. MEANS AND STANDARD DEVIATIONS OF SFB, UFB, AND NFB TEAMS ON EXPERIMENTAL MEASURES 341

LIST OF TABLES

TABLE		PAGE
I	Positive (+) and Negative (-) Changes which were Significant at .05 Level in Bowers' Study of Capstone Groups	16
II	Summary of Deep et al., Stinson, and Hall and Williams Studies	29
III	Breakdown of Experimental Subjects	48
IV	Tasks Used in Experiment	57
V	Tape Scoring Results	60
VI	Number of Teams per Condition for Three-Way Analysis of Variance	63
VII	Summary of Results of Two-Way Analysis of Variance on Pretest Task #1	65
VIII	Summary of Results of Two-Way Analysis of Variance of Team Scores on Pretest Task #2	65
IX	Summary of Two-Way Analysis of Variance of Team Scores on Pretest Task #3	66
X	Summary of Two-Way Analysis of Variance of Pretest Task #3 Team Scores which had been Calculated by Averaging the Individual Members Scores	67
XI	Summary of Two-Way Analysis of Variance of Team Productivity on Training Task #1	68
XII	Summary of Two-Way Analysis of Variance of Team Productivity on Training Task #2 A	68
XIII	Summary of One-Way Analysis of Variance of E 3 SFB, UFB, and NFB Team Productivity on Training Task #2 B	69
XIV	Summary of Two-Way Analysis of Variance of Team Productivity on Training Task #3	70
XV	Summary of Two-Way Analysis of Variance of Team Performance on Team Paper	71

TABLE		PAGE
XVI	Summary of Two-Way Analysis of Variance of Within-Team Resources in Relation to Post-Test Task #1	72
XVII	Summary of Two-Way Analysis of Variance of Team Productivity on Post-Test Task #1	72
XVIII	Summary of Two-Way Analysis of Variance of Team Productivity as Contrasted to their most Productive Individual Member	73
XIX	Summary of Two-Way Analysis of Variance of Lego Assembly Time for E 1 and E 2 Teams	74
XX	Summary of Two-Way Analysis of Variance of Planning and Assembly Time for E 1 and E 2 Teams	74
XXI	Summary of One-Way Analysis of Variance for Lego Figure Assembly Time of E 3 SFB, UFB, and NFB Teams	75
XXII	Summary of One-Way Analysis of Variance of Planning and Assembly Time for E 3 Teams	75
XXIII	Summary of Results of Three-Way Analysis of Variance of Team Productivity on Post-Test Task #3	76
XXIV	Summary of the Results of Three-Way Analysis of Variance of Team Productivity on Post-Test Task #4	77
XXV	Productivity of Intact and Ad Hoc SFB, UFB, and NFB Teams on Post-Test Task #3	78
XXVI	Productivity of Intact and Ad Hoc SFB, UFB, and NFB Teams on Post-Test Task #4	78
XXVII	Comparison of Hypothesized and Actual Productivity of Teams on Post-Test Tasks #3 and #4	79
XXVIII	Cohesiveness of SFB and UFB Teams Contrasted with that of NFB Teams	81
XXIX	Summary of Two-Way Analysis of Variance of Team Responses to the Pretest Survey	82
XXX	Summary of Results of Two-Way Analysis of Variance of Team Responses to Individual Pretest Survey Questions	83
XXXI	Summary of the Results of Two-Way Analysis of Variance of Team Member Responses to Post-Test Survey Questions 6 through 12	84

TABLE PAGE

XXXII Summary of Results 86

XXXIII Summary of t Tests Comparing Experimental and Comparison Teams 91

LIST OF FIGURES

FIGURE PAGE

1 Overview of the Design for Experimental Classes 49

2 Two-Way Analysis of Variance Design 61

CHAPTER I

INTRODUCTION

Organization Development (O.D.) has been variously described as a "process (Burke & Schmidt, 1970, p. 384)," "the creation of a culture (Hornstein, Bunker, Burke, Hornstein & Lewicki, 1971, p. 5)," and an "educational strategy (Kegan, 1971, p. 4)." The definition which has been accepted by the writer and used throughout this dissertation is that it is ". . . an educational strategy employing experience based behavior in order to achieve a self-renewing organization (Kegan, 1971, p. 4)."

The ideal of creating self-renewing organizations has become popular and O.D. is often seen as a vehicle to achieve this ideal. For example, Gardner (1968), predicted that the energy put into O.D. would grow larger as the rate of societal and environmental change increased and as the resulting need for constant renewal became more and more acute.

As a relatively new and still evolving field, the claims made on O.D.'s behalf by its proponents tend to outstrip the research evidence supporting such claims. Indeed, it appears that Kaplan's (1964) law of the instrument ". . . give a small boy a hammer, and he will find that everything he encounters needs pounding (p. 28)" may be becoming operative in relation to O.D. This situation has a familiar ring to those practitioners, including the writer, whose initial enthusiasm in relation to T-groups was ultimately tempered by the research evidence which began slowly to accumulate.

Most O.D. research has, to this point, been conducted in a field setting and consequently the results have usually been threatened by the lack of comparison groups, selection bias, uncontrolled intervening variables, and maturation. An additional difficulty in securing reliable research evidence in relation to O.D. has been the wide variety of approaches and O.D. interventions which have been used (See Appendix A). As a result, very few studies have been reported in which the interventions or "treatments" have been similar, let alone identical. Consequently, meaningful comparisons between results claimed by the various studies and their relationship to a particular intervention are extremely difficult.

PURPOSE OF THIS STUDY

The purpose of this study is to make a contribution toward closing the gap between research evidence and O.D. theory and practice by assessing one particular O.D. technique, namely team building, in a relatively rigorous and replicable experiment.

As Burke (1971) has observed, team building ". . . is probably the cornerstone of O.D. and is utilized most often (p. 574)." This has certainly been the case in the writer's consulting experience. While the anecdotal evidence from staff groups with which the writer has worked has suggested that they were pleased with the team-building experience and felt that it was worthwhile, the question of the impact of the experience upon their productivity has remained unanswered. As the review of research to be reported later will show, this is not an uncommon experience.

Therefore, the experiment reported herein has attempted to assess the effects of team-building experiences upon teams' actual productivity as well as their subjective evaluation of its impact.

This was done by randomly assigning university students enrolled in undergraduate business courses to five-person teams. These teams were then randomly assigned to one of the following three conditions.

1. Type A team building
2. Type B team building
3. Control

The level of task achievement (productivity) of these different types of teams was measured in relation to a variety of tasks before, during, and after their team-building experiences. In addition, team members responded to a questionnaire concerning their team functioning both prior to, and after, team building.

Thus, teams receiving different types of team-building experiences were assessed in relation to their actual task productivity and their subjective evaluation of the impact of the team building upon their team functioning.

The following chapters will, in turn, deal with (1) the theory and research related to O.D. and team building; (2) the issues raised by the research evidence on team building; (3) the experimental design of the study; (4) the results achieved in this experiment; and (5) a discussion of the results, together with recommendations for future research.

CHAPTER II

THEORY AND RELATED RESEARCH

Organization Development, as its name implies, is concerned with organization change. Leavitt (1965) has suggested that there are three basic approaches to effecting change in organizations:

1. Structural approaches. This involves the manipulation of systems of communication, authority, and work flow.
2. Technological approaches. This involves manipulation through the use of direct problem-solving interventions such as work measurement techniques or computers.
3. People approaches. This involves changes in the skill levels, attitudes, knowledge and behavior of the people in the organization.

The great majority of O.D. efforts could be classified as people approaches; however, as Leavitt (1965) has pointed out, the organization variables of structure, technology, people, and task are interacting and change in one variable (e.g. people) may well result in a corresponding adjustment in some or all of the other variables. Consequently, while the O.D. approaches to be reveiwed in the following sections fall into the people-approach category, their impact is not restricted to that one variable.

The following review of research and theory has been divided into four sections as follows:

1. A brief overview of O.D. research.

2. An outline of the theory and models relating to team building which was, of course, the O.D. intervention of primary concern in this project.
3. A review of team-building research conducted in the field.
4. A review of team-building research conducted under laboratory conditions.

O.D. RESEARCH

Team building has often been used in conjunction with other techniques. Many such multifaceted O.D. interventions have been reported in the literature; however, because of their nature, it has been impossible to ascribe the results solely or even partially to the team-building component. Nonetheless a brief overview of the general O.D. research is in order, as the findings, while not necessarily directly applicable to team building, do provide guidance and suggest variables which may be important in team building.

Buchanan (1967) reviewed ten O.D. cases and found the following similarities among those which he judged to be successful. (A basic criterion for "success" was the continuation of the planned improvement after the project itself was terminated.)

1. The top manager of the target system was actively involved in the project.
2. A model for collecting data and for diagnosing the system's needs, which could be considered by the members of the system in establishing goals for improvement, was introduced and "institutionalized." This was seen by

Buchanan to be a very basic point.

> It is my impression although I cannot prove it from these cases, that successful introduction of a new and viable model, relating to a fundamental aspect of the organization's operation, was one of the single most important contributions of the change agent in the successful cases (p. 63).

3. All models concerned the problem-solving process of the organization.
4. All projects resulted in changes in the power structure of the organization. This included changes in the kind and amount of power used, and in the distribution of influence.
5. Models emphasized the development of norms and skills which facilitated a shift from relationships based on negotiating or bargaining toward relationships based on problem solving or collaboration.

In comparing the successful and the unsuccessful cases, Buchanan (1967) identified linkage between the target system and the larger (external) system as well as linkage with other persons, issues, and/or parts within the target system, as crucial variables. In unsuccessful cases the attempts to establish such linkages were judged by Buchanan to be ineffective. As supporting evidence for this conclusion he noted that, in two of the unsuccessful cases, changes were initiated and progress was being made, only to come to a halt because of action by management above the top man in the target system.

It will be noted that training was not a common denominator among the successful cases nor did it help to distinguish the successful from the unsuccessful cases. Two of the seven successful cases did not involve formal training sessions and the training in the other successful cases ranged from training in problem solving (Zand, Miles, & Lytle, 1964), to laboratory training for members of management (Dennis, 1964), to team training (Beckhard, 1966). The unsuccessful cases included a T-group for managers (Argyris, 1962), as well as laboratory training (Buchanan & Brunstetter, 1959) that appeared to approximate that of Dennis (1964).

There were a variety of input variables, in addition to training, in these cases. This fact, coupled with the sketchy descriptions of the training itself, makes it impossible to isolate or draw conclusions about the impact of a particular type of training upon the success or failure of the project.

The writer has reviewed the O.D. literature up to the present and has concluded that Buchanan's (1967, 1971) observations already noted, remain valid. Three further points, however, can now be made.

1. Three relatively rigorous O.D. experiments (Schmuck, Runkel & Langmeyer, 1969; Bigelow, 1971; Fosmire, Keutzer & Diller, 1971) have demonstrated that O.D. projects with a high training component can be successful in relation to schools.

   In the Schmuck et al. study, positive results, at least in part attributable to the intervention, were judged to have occurred at the level of school structure, in the teachers' verbally expressed attitudes about the principal and staff meetings, in the kinds of teaching innovations reported, and in the organizational norms of the faculty.

Fosmire et al. reported that:

> (1) teachers exhibited greater interpersonal openness, and (2) students saw the faculty as more receptive to student ideas, opinions, and attitudes, and as a result they become more co-active with the staff in making decisions affecting their learning, they developed stronger feelings of responsibility toward fellow students and faculty and they developed stronger student-enforced 'internal' norms bearing on behavior in unsupervised areas as well as in the classroom (pp. 110-111).

The common training content in all three of these studies was training in interpersonal communication skills and problem solving.

2. The relationship between an O.D. intervention and organizational productivity has yet to be clearly demonstrated. Increases in productivity have been reported (Blake & Mouton, 1969, 1970; Bartlett, 1967; Beckhard, 1966); however, the validity of these studies is questionable due to the lack of control or comparison groups.

   The results of O.D. interventions on organizational units for which there is no objective measure of productivity (Kegan, 1971), but merely a theoretical relationship between attitudes and behavior vis à vis productivity can, of course, contribute little.

3. Organizational climate is an important confounding variable in relation to change and may interact differently with different O.D. approaches. Bowers (1973) measured climate with the Survey of Organizations Questionnaire which assesses such factors as communication,

motivation, decision making, and degree of influence felt by lower level employees over what goes on in their department. He found that the results achieved by some O.D. approaches were more influenced by a changing organizational climate, as measured by the Survey of Organizations Questionnaire, than were the results achieved by other O.D. approaches.

This study will be reported in greater detail later in this chapter.

TEAM-BUILDING THEORY AND MODELS

The interest in team building by most O.D. practitioners has been a natural consequence of their assumption

> . . . that groups and teams are the basic units of organizations to be changed or modified as one moves toward organizational health and effectiveness. Individual learning and personal change do occur in O.D. programs as a fall-out -- these are not the primary goals or intentions (Beckhard, 1969, p. 16).

There are several approaches to team building and the following have been selected as representative samples.

Action Research Model

This approach is usually used to improve the work of the team members and/or for setting goals. Typically, it follows four steps.

(a) Data collection.

(b) Data feedback.

(c) Development of action plans to deal with the situation as newly defined by step "(b)".

(d) Implementation of plan(s) and evaluation of results through data collection and data feedback.

Such an approach can be useful in assessing a broad variety of factors from both the internal and external environment of a team as well as their productivity or performance. Data may be collected by means of a survey instrument, interviews, or a simple problem census among team members.

Grid Model

Blake and Mouton (1969) have developed a six phase program of Grid Organization Development. Team development is the second phase and is regarded as an integral part of the total package. The five steps in team development, one of which is the use of survey instruments in developing performance goals for both the team and the individual members, are outlined in Appendix B.

Rational Model

Parlour (1971) has suggested that responsibility-oriented concepts of group psychodynamics are highly applicable to the strategic realities of the manager. He did not, however, outline the method by which these concepts would be operationalized in his article entitled Executive Team Training.

Consultantless Team-Training Model

Gibb (1972) has outlined an application of his TORI theory to organization development. His position is that team building is not a training function but rather a line function and in his words

". . . is one of the few vital functions that a line manager cannot delegate (p. 36)."

Typically the line managers meet with a consultant prior to the 2 1/2 to 3 1/2 day off-site meeting which the manager will have with members of his team. The focus of the teams' off-site meeting is on the solution of operating problems as contrasted to group and interpersonal processes. In the preparation meeting with the consultant, the managers have the opportunity to (1) ventilate their concerns about conducting their sessions; (2) develop a questionnaire or other instrument to diagnose their teams' functioning and operating problems and; (3) practice various skills such as setting agenda and handling conflict.

The consultant does not attend the team meetings, but does meet with the manager after the session, and before and after any follow-up sessions to continue to reinforce the ". . . efforts of the line manager to be proactive, assertive, interdependent, and to take responsibility for his own operations (p. 41)."

Training Model

Teams are often trained to improve their skills and performance along particular dimensions which a practitioner regards as being important to effective team functioning. In view of this, training has been identified as a distinct model. It is, of course, recognized that training is also a component in all of the preceding models.

The group of studies cited (p. 7) as having had a major training component, emphasized skill building in problem solving and interpersonal communications and would therefore be classified as following a training model.

Process Consultation Model

The specific team-building approach on which this project was partially based was that developed by Schein (1969).

Schein (1969) has outlined an approach entitled "Process Consultation" which has been used in relation to both teams and the larger organization of which they are a part. He has identified six processes that occur in organizations which he considers to have an important bearing upon performance:

1. Communication.
2. Member roles and functions in groups.
    - (a) Self-oriented behavior
    - (b) Task and group maintenance functions.
3. Group problem-solving and decision making.
4. Group norms and group growth.
5. Leadership and authority.
6. Intergroup co-operation and competition.

The basic assumption is that effective performance will be positively related to the organization's (team's) ability to perceive, understand, and act upon events in its processes. A team which has the ability to monitor both its internal and external environment and to adjust to changes in them, would be described as one which is self-renewing.

In practice, Schein's approach, which basically follows an action research model, is often preceded by, or interdispersed with, training activities designed to improve such skills as communication, decision making, observation, and self-awareness. The experiment to be reported in Chapter V utilized such a combination and could be described as team training in process awareness.

Such an approach does carry with it the danger that a team may become so focussed on a particular process that its productivity may suffer as a result. Schein (1973) reported two experiences in which this may have been the case. He worked with a group of top managers who had previously had an O.D. consultant and who wished to continue their "growth and development." Schein indicated that he

> . . . found that the major hangup was that the group was so interpersonally sensitive and put such a high premium on keeping what they considered to be 'good relationships' that they were, in effect, paralyzed in getting their job done and highly frustrated because they did not know what was wrong (p. 46).

Schein's contribution in this instance included helping them get focussed on their task, to face conflicts in task-relevant areas, and press them for action when they seemed hung-up on an interpersonal issue which was irrelevant to the task.

The following review of the research evidence on team building (training) will more clearly identify this as well as other issues.

FIELD RESEARCH ON TEAM BUILDING

Following the distinction of Lorge et al. (1958) the research reported here encompasses traditioned[1] work groups and excludes ad hoc[2] laboratory groupings.

---

[1] A traditioned work group is one in which the members have progressed through the stages of coming together in physical proximity, of organizing for common goals, and of accepting committment for the group's purposes.

The great bulk of literature on team building is of the case study variety -- lacking both comparison groups and in many instances any effort to measure results by internal, let alone external, criteria. Additionally, the very sketchy descriptions of the interventions, particularly those utilizing a "lab" approach, make comparisons impossible. Hence the field research to date has raised many questions and provided few answers.

Team Building and T-groups

One of the major questions that has been raised is the utility of laboratory training, which contains a sensitivity training or T-group component, in relation to staff groups. There have been several instances in which such training was associated with failure (Green, 1970; Argyris, 1962; Miles & Schmuck, 1971) but likewise several in which positive results were reported. The most successful cases of such training appeared to have a focus. For example, Davis (1967) emphasized that the lab was a means to an end; Kuriloff and Atkins (1966) strongly encouraged the immediate application of learnings on the job; and Friedlander (1968) encouraged the use of concrete work experiences as examples during the sessions.

Harley (1971, Appendix C) has drawn a distinction between a T-group and a team-development experience. The three successful cases, noted above, appear to fit Harley's definition of a team-development as contrasted to a T-group experience.

---

[2] Ad hoc groups are temporary formations of individuals into groups. Members of such groups usually have not had previous group experience with each other.

Type of Team Building

A broader question but somewhat related to the first is what kind of team training is most effective?

Bowers (1973) reported a study mentioned earlier (p. 8) which compared the relative effectiveness of four O.D. techniques in relation to each other and two control conditions. The techniques studied were: (1) survey feedback (SF); (2) interpersonal process consultation (IPC); (3) task process consultation (TPC); and (4) laboratory training (LT). The control conditions were data handback and no treatment. The Survey of Organizations Questionnaire (Taylor & Bowers, 1972) was used as the pre and post measure.

The research reported results for both the management (Capstone) groups and the system of which they were a part. This review has, however, been restricted to the former, as work with the Capstone groups amounted to team building and is therefore of primary interest for present purposes.

The following table summarizes the significant changes achieved with Capstone groups in the Bowers' study.

TABLE I

POSITIVE (+) AND NEGATIVE (-) CHANGES WHICH WERE SIGNIFICANT AT

.05 LEVEL IN BOWERS' STUDY OF CAPSTONE GROUPS

	TREATMENT CONDITION					
Area-Measure	Laboratory Training N = 116	Interpersonal Process Consultation N = 12	Task Process Consultation N = 38	Survey Feedback N = 85	Data Handback N = 55	No Treatment N = 51
ORGANIZATION CLIMATE						
Human Resources Primacy	-			+		-
Communication Flow	-			+	+	
Motivational Conditions	-			+		
Decision-Making Practices	-		+	+		-
Technical Readiness				+	no data	no data
Lower Level Influence				+	-	-
MANAGERIAL LEADERSHIP						
Support						
Interaction Facilitation					+	+
Goal Emphasis					+	
Work Facilitation					+	
PEER LEADERSHIP						
Support	-			+		-
Interaction Facilitation				+		
Goal Emphasis				+		
Work Facilitation				+		
GROUP PROCESS	+			+		
SATISFACTION			+	+	no data	no data
TOTAL	1+, 5-	0+, 0-	2+, 0-	12+, 0-	4+, 1-	1+, 4-

At first glance it would appear that survey feedback with twelve positive changes was the most effective treatment. Data handback, one of the control conditions, showed the second best improvement with four changes in the positive direction and one in the negative direction. Laboratory training showed the most deterioration with only one positive change and five in the negative direction. It was closely followed by the no treatment control condition which reported one positive and four negative changes.

Such conclusions must be tempered by the following facts.

1. The pre and post measure instrument was also the developmental tool for the survey feedback groups. Consequently recipients of this treatment were likely more sensitized to the factors which were measured in the post-test than were the other groups. It should, however, be noted that, regardless of the type of treatment which the group received, at least one member of each Capstone group, and in many instances all the members of the group, received summary results of the pretest measure.
2. Assignment to treatment conditions was not random, although Bowers forcefully argues that neither was it systematic.
3. The distinction between treatments was not clearly made in the report. For example, Bowers (1973) suggests that interpersonal process consultation has some resemblance to Schein's (1969) Process

> Consultation whereas task process consultation " . . . is oriented very closely to task objectives and the specific interpersonal processes associated with them (p. 25)." The inference seems to be that Schein's approach is not concerned with interpersonal processes as they relate to task objectives or achievement. This writer is confident that such an interpretation would be vigorously denied by Schein.

Laboratory training was described as more closely approximating an interpersonal relations laboratory than an intra-psychic or personal growth session. It was comprised of experiential exercises such as the "Lost-on-the-Moon" or "Tower Building" problems, interspersed with unstructured discussion time.

Lieberman, Yalom, and Miles (1973) have recently reported that the ideological label of the various sensitivity training groups in their study meant very little in predicting leader behavior and member benefit. This might also be the case in the Bowers' study particularly with those treatments which are less structured than survey feedback. Consequently, interpersonal process consultation by consultant 'A' may have entailed much different interventions, values, and foci than interpersonal process consultation by consultant 'B'. A similar argument for differences within the task process consultation and laboratory training treatments can also be made.

While the points above do not invalidate the study, they do make it impossible to draw any strong conclusions about the effectiveness of one treatment vis à vis another.

The results of Bowers' work do, at minimum, suggest that survey feedback is a useful technique; that the Survey of Organizations questionnaire is a sensitive instrument; and that organizational climate is a confounding variable in achieving organization change. This last conclusion is based upon the fact that the results of laboratory training in particular became more positive when the effect of organization climate was removed by statistical manipulation.

Team Building and Team Productivity

A basic question in team building is its effect both upon the productivity of the team itself and the individuals belonging to it. The following three field studies were analyzed in search of answers to the question of productivity.

Shapiro and Ross (1971) reported a study in which inmates of an institution were able to discriminate between female supervisors who had undergone laboratory training with a T-group format from those who had not undergone such training. While this study, unlike those reported above, measured results with external criteria (direct job related behavior) there is no evidence that the trained supervisors were better able to work together or were more "productive" as a team because of the training.

Zenger (1967) reported a carefully controlled experiment, conducted in a life insurance company, in which the experimental organization was randomly selected from a group of candidates. Matching control groups were identified and conventional training was applied to one control group to counteract the Hawthorne effect.

Experimental procedures were conducted over a one and one-half year time period, with measurements being taken prior, during, and after the experiment.

The training consisted of three phases:

Phase #1 A three-day team-training laboratory and follow-on sessions which were held with the experimental groups' supervisors. Those attending were five first-line managers and their organizational supervisor.

Phase #2 Three of the five first-line managers met with their subordinate agents in a three-day training laboratory.

Phase #3 Two subsequent follow-on meetings were held with the entire populations of the five groups.

Results showed that:

1. Agents' income increased.
2. The organizational unit moved upward in overall company rankings.
3. The perceptions held of superiors changed in a positive direction.
4. Perceptions of peer group members changed in a positive direction.

As the most rigorous field experiment on team training which the writer encountered in his search of the literature it is indeed unfortunate that the results do not shed any light on the question of the effect of the training on the ability of the staff to function more effectively and productively as a team. Like Shapiro and Ross' (1971) supervisors and Fosmire et al. (1971) and Bigelow's (1971) teachers, successful results were achieved; however, again it was with a population characterized by a relatively low degree of interdependence.

Beckhard and Lake (1971) conducted a follow-up study on Beckhard's (1966) project which was noted previously (p. 6). In this instance the population was characterized by a higher degree of interdependence than the institutional supervisors, insurance agents, and teachers of the previous studies. In this case, action by one individual or division in the bank could directly affect the productivity or work of others and the overall welfare of the bank itself depended upon the co-operation and co-ordination of the various divisions.

The intervention in the original project had several steps.

1. Discussions were held with the upper level of management to expose them to the theories of, and results achieved by, organization development.
2. Management agreed to an experiment in which a small section of the operation would be exposed to a planned intervention.
3. The target group of twelve individuals, nine managers from one division and three from another, as individuals, attended a sensitivity laboratory.
4. The intervention then followed the action research model of data collection, data feedback, and action

> planning, followed by review and further planning.
>
> Three weekend meetings with the consultant were held with the "team" at intervals of six months. At the last meeting the team decided that there was no more need for the weekend sessions as the work was being adequately handled by the task forces which they had set up.

The evaluation was conducted utilizing interviews and questionnaire surveys conducted with the participants themselves, their superiors, subordinates, and work peers. In addition, productivity, absenteesm, and turnover were monitored. Data from a "control" group were also analyzed.

The results were generally positive and the intervention was judged to have resulted in more flexible decision making, increase in influence below and above the team, an enhanced sense of self-direction for the managers involved, and greater concern for the entire bank's problems. Productivity was up and turnover and absenteeism were down.

As the authors themselves noted, it was impossible to directly ascribe what was happening four years later to the original intervention. This was especially true in this case, as a major technological change had been made in the bank after the training and prior to the follow-up study.

In summary, the field research suggests that team training which has a clear focus of improving on-the-job functioning and achievement may be more successful in relation to staff teams than those laboratory training or T-group interventions which focus primarily upon improving interpersonal relationships. Survey feedback, an action-research technique, appears to show promise as an effective tool; however, none of the approaches have clearly demonstrated their contribution to increased team, as contrasted to individual productivity. Based solely upon the evidence presented by Bowers it would appear that an organization's climate may be a confounding variable in team building. The question of the impact of team building upon the productivity of a team whose members are fairly interdependent has yet to be assessed in a study which is free of major threats to validity.

LABORATORY RESEARCH ON TEAM BUILDING

The following experiments highlight some of the issues relative to team training and productivity.

Deep, Bass and Vaughan (1967) took ninety-three graduate business students and formed them into groups containing from nine to eleven members. For the first term of fifteen weeks, these groups met as leaderless T-groups for a total period of thirty hours. During the second term, each group was split in half and met as a study group and prepared papers on organizational analysis. For the third term the groups were organized as follows:

1. Three groups identical to the first term (intact T-groups).
2. Three groups composed of one-half of one T-group and one-half of another.
3. Three groups each of which were formed by

bringing together one-third of the membership of three different T-groups.

These nine groups (three types of groupings) then played the Carnegie Tech. Management Game for thirty periods of play with the following results. The intact T-groups lost 5.37 million dollars instead of showing profits as did the other types. They had the highest costs due to poor planning, exhibited greater sales forecasting errors, and yielded the least gain in stock value. Only one of the productivity measures (sales forecasting error) was, however, statistically significant.

At the interpersonal level the intact groups reported significantly more group contact ease, individual contact ease, perceived familiarity, and perceived openness. They were also significantly more cohesive. As Deep et al. noted, "better interpersonal relations tended to go hand in hand with poorer business decisions (p. 430)."

The game administrators suggested that the intact T-groups tended to have too many chiefs and not enough indians, which in turn led to difficulty in organizing themselves. In addition, the administrators felt that there was an unrealistically high level of trust and confidence, on the part of the intact groups, that their fellow company members would do their share so that their company would be prepared when the game deadlines occurred.

While the above results are highly suggestive, in a strict experimental sense, the impact of the treatments upon productivity was not clearly demonstrated.

Stinson (1970) improved on the Deep et al. (1967) design with an experiment which featured a pretest, post-test, control group, and random assignment of subjects. In this experiment the students participated in the General Management Simulation for six to eight hours prior to being assigned to one of the following conditions.

1. Intact simulation groups.
2. Fragmented simulation groups in which no two members were from the same pretest simulation group.
3. Intact simulation groups.

Conditions one and two recieved training in a two-day instrumented[1], task oriented laboratory session while group three received no training. After the two-day training session, the groups reverted to their original pretest simulation groupings to complete the simulation.

The results confirmed the findings of Deep et al. that intact trained groups performed less well in terms of profit and stock prices than either of the other two types of groups. As with Deep et al., however, the differences between the teams in these productivity measures were not statistically significant. Forecasting error, which was Deep's et al. only significant "productivity" finding, showed no consistent trend in Stinson's study. Indeed, the only significant finding of Stinson was the greater cohesiveness of the intact-trained groups in relation to the control group. This latter finding was not too surprising given the greater number of member-contact hours which the intact-trained groups had together.

---

[1] An instrumented laboratory is one which utilizes questionnaires or other survey instruments to help focus the participants' discussions of their laboratory experiences.

The fairly clear trend of lower productivity of intact-trained groups as contrasted to ad hoc groups found in the two studies just reported, was not confirmed by the findings of Hall and Williams (1970).

In an earlier study which did not involve training, Hall and Williams (1966) had found that groups of managers who had had a minimum of fifty contact hours with each other (i.e. were traditioned groups) produced significantly higher quality decisions in the 12 Angry Men decision-making exercise than ad hoc groups of managers. Using the same exercise, Hall and Williams (1970) tested groups of psychology students, managers, and neuropsychiatric patients, each of whom were divided into intact (traditioned), ad hoc, trained, and untrained groupings. The results showed that the trained groups, both intact and ad hoc, produced significantly higher quality decisions than the untrained groups; however, there was no significant difference between the decision quality of intact as contrasted to ad hoc groups, in either the trained or untrained conditions.

No measures of cohesiveness were taken in the Hall and Williams' studies.

SUMMARY

From the foregoing research reviews, it is evident that the theoretical expectation of team training resulting in increased productivity for a traditioned team has yet to be clearly demonstrated in a study in which there are both internal and external criteria measures as well as random assignment of conditions. Zenger's (1967) study met these criteria; however, it would appear that the level of interdependence among his subjects might be low enough to interpret the results as increased individual, as contrasted to team, productivity.

The laboratory studies seem to suggest that, at best, team training of intact teams results in no productivity differences between them and ad hoc teams composed of trained individuals. At worst, such training may have negative impact upon the productivity of intact teams.

These latter studies raise a number of issues in relation to type of training, measures of productivity, and cohesiveness. These issues will be explored in the next chapter.

CHAPTER III

ISSUES RAISED BY THE EXPERIMENTAL RESEARCH

This chapter will examine the nature of the training and the experimental tasks, together with the associated theoretical issues, in an effort to account for the failure of team training to produce the expected increases in productivity of the intact teams in the Deep et al., Stinson, and Hall and Williams studies. A summary of the major components of these studies is outlined in Table II on the following page.

Training

Deep et al. described the training which their university graduate business students received as a quasi-T-group experience. It was so termed because they were trainerless and met for thirty hours over a fifteen week period. During this period the teams did process analysis.

Stinson's training was conducted with senior and graduate business students over a two-day period and was described as laboratory training in collaborative task effort. The training program consisted of a total of seventeen hours and was composed of lectures, group and individual exercises followed by evaluation sessions, and general sessions. A total of ten hours was devoted to work-group activity.

The last work-group activity consisted of selecting from a list of statements and sharing the statement with a fellow group member to whom, it was felt, the statement was applicable. The first

TABLE II

SUMMARY OF DEEP ET AL., STINSON, AND HALL AND WILLIAMS STUDIES

Experimenters	Type of Training	Amount of Training	Population	Group Size	Task	Statistically Significant Results	Non-Significant Measures Between Groups
Deep et al. (1967)	Leaderless T-Group	30 hours	93 Graduate Business Students (9 groups)	9 - 11	Carnegie Tech. Management Game (Cohen, Dill, Kuehn, & Winters, 1964)	Intact trained teams made more forecasting errors than other groups. Also reported more perceived openness familiarity and cohesiveness.	Profits, costs of poor planning, gain in stock prices and perceived openness and similarity.
Stinson (1970)	Laboratory training in collaborative task effort.	2 days (17 hours)	75 Seniors and graduate students enrolled in business class (15 groups)	5	General Business Management Simulation (Hellebrandt & Stinson, 1965)	Intact teams more cohesive than control groups.	Training fadeout, work group effectiveness, forecasting error, perceived work group effectiveness, group drive and member satisfaction.
Hall and Williams (1970)	Instrumented Training (Blake & Mouton, 1962)	varied 25 - 40 hours	96 Social psychology students (20 groups) 141 managers (20 groups) 140 psychoneurotic patients (20 groups)	4 - 7	12 Angry Men (Hall, Mouton, & Blake, 1963)	Trained groups both intact and ad hoc, provided decisions of higher quality, showed greater gain in quality of group decisions as contrasted to average of individual decisions, achieved assembly effect bonus more, and performed better in relation to its most accurate member than untrained intact and ad hoc groups.	All measures in column on immediate left comparing intact and ad hoc groups.

contained such statements as "tended to dominate the discussion" and "was more interested in harmony than in getting the job done (pp. 137-139)."

The training of the Hall and Williams' groups utilized the instrumented-training technique developed by Blake and Mouton (1962).

> To the extent that group competence in decision making may be considered to be an extension of the interpersonal competencies of group members, the objectives of the instrumented approach employed in this study are quite similar to many of those subsumed under a T-group intervention (Hall and Williams, 1970, p. 43).

Such training typically consists of a series of exercises designed to identify and demonstrate critical elements of group life. Participants are then stimulated to develop principles and insights on both group and individual behavior through the instrument-stimulated feedback sessions. Dimensions such as cohesion, group structure, mutual support and trust, leveling, decision making, and intermember influence are explored in this manner.

The training period for the social psychology students extended over a semester and consisted of approximately twenty-five hours. The length of the training itself and the time frame in which it was conducted varied widely within the management and neuropsychiatric patient groups; however, in all cases no less than twenty hours had been devoted to training.

The differences in training between these projects and the possible effects of these differences upon the feedback and openness of the teams and, in turn, their team productivity will be examined in the following two sections.

Structured versus unstructured feedback. There appears to be a difference between the Deep et al. study and the other two in the type of feedback in which the groups engaged. The use of survey and other instruments in the Stinson and Hall and Williams studies presumedly elicited what could be termed guided or "structured" feedback whereas the Deep et al. study appeared to deal in less guided or "unstructured" feedback.

The theoretical advantage of a survey instrument, which can be used for structured feedback, is that the group, through the tabulation of member responses to the instrument, can construct a group profile which reflects all the members perceptions on a variety of group dimensions. Having taken a global look at their situation, they are then free to work on those dimensions of particular interest or concern. On the other hand, in an unstructured feedback situation only those dimensions raised by the trainer and/or group members are examined. Consequently, there is a possibility that potentially important dimensions may be ignored. In addition, not all individual perceptions of the dimension under discussion are necessarily shared or reported.

Given the greater length of training, it is presumed that the Hall and Williams groups would have had a greater amount of structured feedback than the Stinson groups. Thus, the fact that the Hall and Williams groups engaged in structured feedback and the Deep et al. groups did not, and that the former engaged in more structured feedback than the Stinson groups may, in part, account for the different results.

Openness. The relative freedom of unstructured T-groups (Deep et al.) to focus upon issues of their own choosing, may lead to the discussion of interpersonal and intrapersonal issues which may be more conducive to personal growth, as contrasted to learning to resolve task-oriented conflict. Some practitioners are today making the distinction between being personally open as contrasted to task-appropriately open. Their assumption is that being personally open is more conducive to personal growth and being task-appropriately open is more conducive to improved performance on the part of an individual and group in achieving a task.

It can, of course, be argued that in the long run personal growth on the part of its members and improved team functioning are not necessarily negatively correlated. However, within limited time restraints, it is hypothesized that a given amount of energy expended upon task-appropriate openness will reflect itself in improved team effectiveness more readily then the same amount of energy directed toward personal growth.

Task-appropriate openness is the sharing of information and feelings which are directly related to group-task achievement. If a group is collecting information upon which it will base a decision and a member has and shares some information on the topic under consideration, he could be described as having been task-appropriately open with his information. Similarly, if he reports feeling inhibited by something or someone in the group, and that this feeling is causing him to withhold his relevant informational resources from the group, then he has been task-appropriately open with his feelings.

Thus, one might infer that the T-group format of Deep et al.

may have encouraged the development of a group norm encouraging a higher level of personal openness, which correspondingly resulted in a lower emphasis on task-appropriate openness, than either of the other studies.

The reason for the particular focus upon Deep's study in this dimension is the fact that it was the only one which produced a significant finding contrary to the hypothesized impact of team building upon productivity.

Combining the two discussions on feedback and openness it is argued that training which is characterized by structured feedback, which encourages task-appropriate openness, will result in higher group productivity than training in which the feedback is unstructured.

The support for such an argument comes from:

1. Buchanan's (1967) impressions that the "institutionalization" of a model for collecting data and for diagnosing the system's needs which could be used in planning goals for improvement was a very important factor in determining success.

   Structured feedback instruments provide such a model.

2. Schein's (1973) observations that groups can lose their task focus and productivity by becoming overly interpersonally sensitive.

3. The relative success of focussed training groups such as Davis (1967), Kuriloff and Atkins (1966), and Friedlander (1968).
4. The effectiveness of survey (structured) feedback (Bowers, 1973).

Communication. There is no indication in any of the three studies under review that there was any skill training in interpersonal communications. In view of the relative success of the studies which contained a major communication skill training component and the obvious dysfunctional consequences of poor communication upon a group's productivity, it is hypothesized that the addition of such training would have beneficial results.

Problem solving. The effectiveness of survey feedback in the Bowers' (1973) study may have been partially due to the fact that the teams engaged in relatively formal problem-solving activities in relation to the issues raised by the survey. There is no indication in the three experimental studies of training in problem solving having occurred, nor of any effort on the part of the team, to formally problem solve the issues raised in their feedback sessions. This is clearly the case in the Deep et al. and Stinson research; however, it might be argued that the Hall and Williams' teams developed some ability and experience in problem solving, given their greater number of structured feedback sessions and the fact that they were spread over a much longer time period than Stinson's.

As with communication skill training, it is hypothesized that training and experience in problem solving, such as is outlined in the action-research model of team building, would have positive impact upon a team's productivity.

Summary. The following summarizes the arguments in relation to training. It is hypothesized that team building, which contains training in communication skills and problem solving, will have a positive impact upon a team's productivity. Further, that teams so trained, which utilize structured feedback encouraging task-appropriate openness, will have higher productivity then similarly trained teams utilizing unstructured feedback.

Measures of Productivity

There is wide agreement (Morris, 1965; Sorenson, 1971; Steiner, 1972; Shaw, 1971) that task demands have a major impact upon a group's functioning and its productivity. For example, Delbecq (1967) has specifically suggested that the purpose and task of a group has an effect upon the following dimensions:

1. Group Structure: In terms of the relationship between the individual members.
2. Group Roles: In terms of the behavior required of individual group members which are necessary to facilitate task accomplishment.
3. Group Process: In terms of the manner of proceeding toward goal accomplishment.
4. Group Style: In terms of the social-emotional tone of interpersonal relationships (e.g. the amount of stress on individual members, the congeniality of interpersonal relations, the

perceived consequences of individual and group success or failure).

5. Group Norms: Relative to each of the preceding four dimensions (Delbecq, 1967, p. 331).

All three experiments utilized only one task to measure team productivity.

In view of the different types of training involved it might be argued that the results simply reflect the appropriateness, or inappropriateness, of the particular type of training given, relative to the particular demands of the task on which the teams' performances were assessed.

To assess the impact of training upon a team's productivity utilizing only one type of task does not appear to this writer to be an adequate assessment. It is not unlike deciding to hire, or not hire, a secretary on the basis of her telephone manner alone, without determining her typing and shorthand abilities. To provide an adequate assessment of the impact of training, and to explore the possible functionality or dysfunctionality of a particular type of training in relation to a particular type of task, it is essential that teams be assessed in relation to a variety of tasks.

Delbecq's (1967) point concerning the impact of a group's purpose upon its structure and processes may provide an alternate explanation for the failure of intact-trained teams to perform as expected.

In the training phase of all three experiments the purpose and task of the groups was learning, not productivity on exercises or simulations. As Delbecq has suggested, such a purpose would likely have encouraged the development of structures, processes, etc. appropriate to learning. Achievement of productivity in relation to an exercise would likely have been a secondary consideration. Consequently, when the groups were given a simulation or exercise where the level of task achievement was the only important criterion, the groups may not have perceived the switch in emphasis from learning to productivity. Thus, the original group norms supporting the learning-appropriate climate, structure etc. may have continued in force, supporting what had now become obsolete or inappropriate ways of functioning.

The absence of such suddenly dysfunctional norms in ad hoc groups is obvious.

Cohesiveness

Stogdill (1959) has suggested that if a group concentrates on the interaction and social facilitation necessary for high cohesiveness, the members will have less time and effort available to devote to task related actions and interactions. This appears to be in keeping with Schein's (1973) earlier observation (p. 13) and may, in part, account for the lower than expected productivity, together with the high cohesiveness of intact teams.

It is recognized that maintaining good interpersonal relations is important to, and likely very rewarding to, an intact team. In an organization the task-environmental feedback for a team may be so remote from its immediate task efforts that most behavior may be supported by interpersonal rather than task-environmental rewards. This situation is intensified where a new team engages in team-building activities prior to becoming "operational" and, therefore, able to secure task-environmental rewards.

The teams of Deep et al. and Stinson may, in their training phase, have been analogous to new teams facing a poverty of task-environmental rewards and feedback, and therefore, have looked to within-team interpersonal relationships for their rewards. Such motivation, particularly among university students may have resulted in better member relations and cohesiveness.

The relationship between cohesiveness and productivity are not necessarily positive. In his extensive review of the research, Stogdill (1972) stated the following:

> Results of the available research do not support the view that high group cohesiveness leads to high productivity. It is found, instead, that group drive or motivation is the variable most consistently related to productivity. Productivity and cohesiveness tend to be positively related under conditions of high group drive. They tend to be negatively related under conditions of low drive and under routine operating conditions (pp. 37-39).

While productivity and cohesiveness do not necessarily go hand in hand Stogdill (1972) warns that pushing for productivity at the expense of cohesiveness can have dysfunctional consequences. High cohesiveness acts as a control mechanism which, if positively oriented to organizational objectives, can produce positive results for the organization. The opposite would, of course, obtain if the orientation was negative. The desirable situation would be to achieve both high productivity and high cohesiveness.

It is possible that the types of training which Deep et al. and Stinson provided, in which team members examined their relationships with one another, may have contributed to the development of high cohesiveness. However, such an interpretation is severely threatened by the fact that the intact teams had a greater number of member-contact hours than the control teams. An assessment of the impact of training upon cohesiveness would require the comparison between trained and control teams who were equal in both group drive and member contact hours.

SUMMARY

To summarize, the focus of this chapter has been to evaluate those factors in the experimental studies which may have accounted for their failure to demonstrate the expected positive impact of team building upon team productivity. In this regard, it has been argued that training, utilizing structured feedback and containing interpersonal communication and problem-solving skill building components, would likely produce "better" results. The need for measurement of team productivity in relation to several different types of tasks has also been argued. In addition the possible impact of the training on group norms and cohesiveness and their relationships to team productivity have been noted.

What is needed at this point is to incorporate these ideas into a relatively rigorous and replicable experiment which assesses the impact of team building upon team productivity. The following chapter will operationally define these variables and state the formal hypotheses.

CHAPTER IV

DEFINITIONS, RATIONALE AND HYPOTHESES

Determination of the impact of team building upon a team's productivity was the primary concern of this study.

It has been argued in Chapter III that the content of the team-building activity, and in particular the type of feedback which it encourages within teams, has an important bearing upon team norms and their resulting cohesiveness and productivity.

In this experiment teams were assigned to one of three feedback conditions -- structured, unstructured, or no feedback and an assessment was made of the impact of these feedback conditions upon their team norms and their productivity.

Team building was defined as training received by teams which was designed to increase their awareness of, and ability to act upon their processes (Schein, 1969). A detailed summary of the design and content of the experiential training appears in the following chapter and the instruments and hand-out material used appear in Appendices D and F.

Productivity was defined as the performance of teams in relation to several tasks. For example, in a decision-making task the team whose decision was the most accurate was regarded as the most productive.

Feedback Types

In Chapter III it was suggested that the type of feedback in which a team engaged was an important variable, both to their internal functioning and their productivity, in relation to experimenter-imposed tasks. The types of feedback identified were "structured" and "unstructured".

Teams engaging in "structured feedback" were operationally defined as those teams whose members individually completed a survey instrument in which they assessed their team processes (communication, decision making, etc.) in relation to a just completed task. These teams were instructed to construct a team profile, based upon their members' answers to the survey, and to discuss each survey item. They were also asked to develop specific plans to make any adjustments in their team functioning which they felt were necessary.

Unstructured feedback teams were not given a survey instrument but simply instructed to discuss those items, based upon their team experience with the task, which they felt were important to their team effectiveness. As with the structured feedback teams, they were instructed to develop specific plans to make any adjustments in their team functioning which they felt, on the basis of their discussion, were necessary.

A third type of feedback team was utilized in this study as a control group and was identified as a "no-feedback team". Operationally, a no-feedback team was defined as one which was instructed to use the time available, while the other teams were engaged in either structured or unstructured feedback, in any way they wished, which they felt would help them meet their team objectives in relation to the course. Thus, no-feedback teams, unlike the others, were not encouraged to analyze and problem-solve in relation to their team processes.

The instructions given to each type of feedback team appear in

Appendix F.

On the bases of agruments already made, it was expected that teams trained in structured feedback would exhibit more productivity on the experimental tasks than would the unstructured feedback teams. (Hypothesis I).

Team Norms

In Chapter III the possibility was mentioned that group norms may have developed during the training phase which were appropriate for the task of member learning but dysfunctional for high group productivity on experimental tasks. To explore this possibility, testing was done on both intact-trained teams and ad hoc teams composed of individuals who had been trained in teams, but who had been reassigned to new teams for the experimental tasks. The assumption was that differences in performance between ad hoc and intact teams would reflect the lack of inter-member experience and established group norms within the ad hoc groups.

It was expected that the intact teams would have a natural advantage over the ad hoc teams because they would have had previous experience in working together and consequently would not have to engage in the time consuming inclusion activities which are typical of new groups. However, in the case of the unstructured-feedback teams, it was assumed that the norms of the intact teams would be dysfunctional to their task productivity and would more than offset any advantage gained by their "intactness". (Hypothesis II).

Openness

In the discussion on openness in Chapter III a distinction was made between personal and task-relevant openness. At that time it was suggested that unstructured feedback teams might engage in a higher proportion of personal as contrasted to task-relevant feedback than structured feedback teams. Further, that, at least in the short run, this might have dysfunctional consequences upon the productivity of unstructured feedback teams on experimental tasks.

In the present study the assumption was made that the scoring of a team's interactions along two dimensions, namely whether the communication was impersonal or personal, would discriminate between teams engaging in the different types of openness under consideration. These two dimensions produce four classifications of interactions.

1. Task-relevant-impersonal
2. Task-relevant-personal
3. Nontask-relevent-impersonal
4. Nontask-relevant-personal

An interaction was defined as a task interaction if it directly related to the achievement of the experimental task. If it did not so relate, it was classified as a nontask-relevant interaction.

The distinction between personal and impersonal interactions was made by collapsing the eighteen scoring categories of Borgatta and Crowther (1965) into two; so that all interactions could be scored as either personal or impersonal.

The Borgatta and Crowther categories which were placed in the personal classification were:

1. Common social acknowledgment.
2. Shows solidarity through raising the status of others.
3. Shows tension release, laughs.

4. Acknowledges, understands, recognizes.
5. Shows agreement, concurrence, compliance.
6. Self-analyses and self-questioning behavior.
7. Shows tension, asks for help by virtue of personal inadequacy.
8. Shows tension increase.
9. Shows antagonism, hostility, is demanding.
10. Ego defensiveness.
11. Reference to the external situation as redirected aggression.

Two of the categories (1) gives opinion, evaluation, analysis, expresses feeling or wish; and (2) draws attention, repeats, clarifies were scored either personal or impersonal depending upon the context in which they occurred. For example, if an individual repeated or clarified a statement which had been scored impersonal, the clarification itself was likewise scored as impersonal.

In keeping with the comments on feedback in unstructured groups it was expected that unstructured feedback (UFB) teams would have a greater number of personal, and a lower number of task interactions than structured feedback (SFB) teams. (Hypothesis III).

A complete summary of scoring categories appears in Appendix J.

Cohesiveness

As discussed before, there appeared to be some possibility that the higher cohesiveness of the intact teams, in the Deep et al. and Stinson studies, might have been partially due to the impact of the training activities. The present study explored this possibility utilizing Seashore's (1954) five-question instrument.

Seashore defined a group as having high cohesiveness if the members

> (1) perceive themselves to be part of the group, (2) prefer to reamin in the group rather than leave, and (3) perceive their group to be better than other groups with respect to the way the men get along together, the way they help each other out, and the way they stick together (p. 36).

A team which scored high on the Seashore instrument was defined as having high cohesiveness and vice versa.

Assuming equal member contact and equal group drive, it was hypothesized that teams which discussed their group functioning, as part of their training experience, would report high cohesiveness, (Hypothesis IV). Inherent in this was the expectation that the structured-feedback training would produce both high productivity and high cohesiveness.

SUMMARY OF HYPOTHESES TO BE TESTED

I Structured feedback (SFB) trained teams will demonstrate higher team productivity on all experimental post-test tasks than unstructured feedback (UFB) trained teams. UFB teams in turn will demonstrate a similar superiority over no feedback (NFB) teams.

II Teams will demonstrate higher team productivity on all experimental post-test tasks over all teams listed below them.

(a) Intact SFB teams.

(b) Ad hoc teams composed of SFB trained individuals.

(c) Ad hoc teams composed of UFB trained individuals.

(d) Intact UFB teams.

(e) Intact NFB teams.

(f) Ad hoc teams composed of NFB trained individuals.

III The tape analysis of UFB teams will produce higher personal and lower task-relevant scores than the analysis of SFB teams.

IV SFB and UFB teams will be more cohesive after training than the NFB teams.

CHAPTER V

EXPERIMENTAL DESIGN

Sample

Subjects for this investigation were the members of three undergraduate classes at The University of Alberta. The classes were composed of students who had enrolled in a business administration course entitled Organization Theory 303 for the fall term of 1973. The purpose and description of this course was judged to be compatible with the training which was provided to all class members. Two of these classes were regular day-time classes primarily attended by full-time students in the 18 to 22 age group. The third class was held in the evening and the majority of students were part-time, and on the average, older than the day-time students.

One instructor worked with the evening class (E1) and one of the day-time classes (E2) and a different instructor worked with the other day-time class (E3).

Students within each class were randomly assigned to teams and the teams within each class were randomly assigned to one of the three training conditions.

Table III summarizes the breakdown of subjects into teams and conditions.

TABLE III

BREAKDOWN OF EXPERIMENTAL SUBJECTS

Class	Instructor	No. of Students	No. of Teams in Condition SFB	UFB	NFB	Average Team Membership	Team Membership Range
Evening (E1)	A	62	4	4	4	5.16	5 - 6
Day-time (E2)	A	92	6	6	6	5.11	5 - 6
Day-time (E3)	B	105	7	7	7	5.00	4 - 6
TOTAL		259	17	17	17	5.08	

Procedure

The experimental period for the investigation was thirteen weeks and commenced with the regular start of university classes in September, 1973. The evening experimental class (E1) was scheduled to meet once a week for a period of 180 minutes and this time was usually divided into two 80 minute periods, separated by a 20 munute break. The two, day-time experimental classes met on Tuesdays and Thursdays for a period of 80 minutes each day.

Figure 1 provides an overview of the experimental design.

In the course description provided to students (Appendix E), it was stated that each individuals' course mark would be dependent upon the performance of his team in relation to the ten tasks (3 pretest, 3 training, and 4 post-test), and the team paper. Teams were assigned points for their performance on the tasks and were responsible for distributing the team points among the individual members. As will be noted in the course description, safeguards were built-in to prevent

FIGURE 1

OVERVIEW OF THE DESIGN FOR EXPERIMENTAL CLASSES

Week I	Class overview and introduction to team-building and communication skill training
Week II	Random assignment to teams
	Pretest task #1[1]
Week III	Pretest task #2
Week IV	Individual communication skill training
Week V	
Week VI	
Week VII	Pretest task #3
	Pretest survey
Week VIII	Training task #1 (member roles and functions)
WeekIX	Training task #2 (problem-solving, decision-making)
Week X	Training task #3 (team norms and climate)
	Team paper handed in
Week XI	Post-test tasks #1 and #2
	Post-test survey
Week XII	Random assignment of day class teams
	to intact and ad hoc conditions
	Post-test tasks #3 and #4

---

[1] A full description of the tasks and the methods used to measure team productivity in relation to them appear in Appendix F.

individual members from receiving points which were either far above or below the average of marks distributed to the other team members.

The relation of course marks to team performance on tasks had the effect of creating teams composed of highly interdependent members.

The maximum number of team points attainable on the first tasks were less than those attainable on later tasks; thus the importance of task performance to individual class grades steadily escalated throughout the experimental period. Where necessary, adjustments were made so that teams were not penalized if teams in their experimental condition were, on the average, performing less well than teams from a different condition.

In addition, each individual team member had the option of doing an individual paper which could, if well done, raise his final course mark.

The purpose of the rather elaborate arrangements described above was to create teams motivated to task achievement.while, at the same time, protecting teams and individuals from being at a disadvantage because of the particular team or condition to which they were randomly assigned.

Communication Training

Hypothesis IV concerned the effect of team building upon team cohesiveness. As neither of the experiments (Deep et al. and Stinson) which reported differences in cohesiveness contained communication training, it was decided not to conduct such training with the individuals working together in their experimental teams. In this way the effect of the communication training would not confound the impact of the group dynamics training on team cohesiveness. Consequently, the communications training was conducted in smaller ad hoc groupings, primarily pairs and trios.

While there were brief communication training sessions in weeks #I - III, all of the time available in weeks #IV - VI was devoted to such training.

The overall objective of the communication training was to increase each individual's skills in both sending and receiving communications so that he (she) could effectively engage in both giving and receiving constructive feedback. Feedback was defined as constructive if it was:

1. Specific in its identification of an event and the event was described in behavioral terms.
2. Nonjudgmental.
3. Motivated by a desire to improve the relationship.
4. Noncoercive in its attempts to change another person.
5. Current in that it concerned an event from recent rather than remote history.
6. Accompanied by a statement of awareness on the part of both the sender and receiver.
7. Understood by the receiver as demonstrated by his ability to accurately paraphrase the communication.
8. Given when it was ready to be received.

For a fuller explanation of constructive feedback see Appendix D 29.

The specific objectives of the communication training and the skills taught within it are outlined below:

Receiving skills -- learning objectives.

1. To be able to recognize the distinctions between behavior descriptions and inferences.
2. To demonstrate the tendency of people to make inferential statements rather than behavior descriptions.
3. To develop a conceptual understanding of the inference process; how and why it happens.
4. To develop self-insights among the participants. (Regarding their own tendency to make inferential statements).
5. To learn alternate methods for handling inferences.
6. To learn the specific skills of paraphrasing.
7. To learn the specific skill of perception checking.
8. To develop some understanding of when to use paraphrasing and perception checking.
9. To develop some understanding of the distinctions between paraphrasing, perception checking, probing, and interrogating.

Sending skills -- learning objectives.

1. To be able to recognize the distinctions

between feelings, thoughts, and observations.

2. To understand the distinctions between expressing feelings directly and indirectly.
3. To understand the normal modes of sending feelings; the difficulties in using the normal modes; and the importance of direct expressions of feelings.
4. To develop some self-insight among the participants regarding their own tendency to express feelings directly or indiriectly.

To recapitulate, the overall objective of the communication training was to provide individuals with skills so that they could share their perceptions of, and reactions to situations involving others in a way that promoted clear understanding of the perception and minimal defensiveness on the part of the receiver. The lessons, exercises, and handouts designed to achieve the above appear in Appendix D.

Team Building

At the beginning of the course, students were given the handout entitled Notes on Team Building (Appendix D 1) which incorporated the notions of Maier (1970) regarding the importance of quality decisions and member acceptance of these decisions as well as Schein's (1969) concepts of processes and process observation.

In addition, the team paper and course reading list (Appendix G) were designed to help the students develop a conceptual understanding of team building through process observation and feedback.

The three training tasks were designed to provide all of the teams with some input on team processes as well as to provide the structured feedback and unstructured feedback groups with an opportunity to process their functioning in relation to the task.

The focus of training task #1 was on the roles and functions of group members; and teams were provided with a handout describing these roles. Teams were then paired; and worked on the task in a fishbowl design. On signal, action was stopped and the outside-observing group shared their observations about the roles that were being played in the inside team. After each team had received feedback, the teams separated and completed the task on their own. A complete description of the timing and design appears in Appendix F 12-15.

Training task #2 was preceded by a lecturette and handout (Appendix F 24) on problem solving and decision making; training task #3 was preceded by a lecturette on the impact of team norms and climate upon team functioning.

After pretest task #3 and all of the training tasks the teams were given a class period (80 minutes) to engage in the type of feedback prescribed by the experimental condition to which they had been randomly assigned.

Structured feedback. The structured feedback teams completed a team survey after pretest task #3 and each of the three training tasks. These surveys (Appendices F 7,19,28, and 36) asked team members to assess their team's performance on those team processes on which they had received some input. For example, on their first survey, questions were primarily limited to those concerning communication; while on the second they concerned both communication and member roles.

As can be seen in the structured feedback processing instructions (Appendices F 9,20,31, and 36), teams were asked to construct a team profile, to discuss each survey question, and to make specific plans to bring about desired changes in their team functioning.

Unstructured feedback. Teams under this condition did not complete a survey but were instructed to discuss their team functioning during the four available periods; and to make specific plans to bring about any changes in their team functioning which they felt to be desirable. The processing instructions to teams in this feedback condition appear in Appendices F 10,21,29,32, and 37.

No feedback. No feedback teams were instructed to "use this class period in any way which you as a team think will help you to fulfill the requirements of this course (Appendices F 11,22,29,32, and 37)." No feedback teams constituted the experimental control condition.

Tasks

In all, each team completed ten tasks plus a term paper.

As noted previously (p. 35), there is wide agreement that the type of task which a group is doing has a major impact upon its structure and processes. It was not the purpose of this project to develop specific proposals in relation to specific types of tasks, rather it was to test team performance in relation to a variety of tasks. However, a brief analysis of the tasks is in order to demonstrate that a variety of task types were utilized in the project.

Hackman (1968) has developed a classification of task types as follows:

1. Production tasks which involve the production and presentation of ideas.
2. Discussion tasks which involve the evaluation of issues.
3. Problem-solving tasks which involves the development of a course of action (p. 164).

Fiedler (1964) has taken four of the scales developed by Shaw (1962) and has used them to describe the degree of structure within tasks. The dimensions which he used were:

1. Decision verifiability. "The degree to which the 'correctness' of the solution or decision can be demonstrated, either by appeal to authority . . ., by logical procedures . . ., or by feedback . . ."
2. Goal clarity. "The degree to which the requirements of the task are clearly stated or known to the group members."
3. Goal path multiplicity. "The degree to which the task can be solved by a variety of procedures."
4. Solution specificity. "The degree to which there is more than one 'correct' solution (Fiedler, 1964, pp. 160 - 161)."

As will be self-evident from Table IV, the author's analysis and rating of the tasks suggests that they varied both in task type and degree of structure.

TABLE IV

TASKS USED IN EXPERIMENT

Task	Task Type	Decision Verifiability	Goal Clarity	Goal Path Multiplicity	Solution Specificity	Location in Appendix
Pretest #1 - Tinker Toy	Problem Solving	High	High	Medium	High	F1
Pretest #2 - Farming	Discussion -- Problem Solving	Low	High	High	Low	F3
Pretest #3 - Communication Quiz	Discussion	Medium	High	Medium	High	F5
Training #1 - Parasol	Discussion -- Production	Low	Medium	High	Low	F12,17
Training #2A[1] - Office Site	Discussion	Medium	Medium	Medium	High	F24
Training #2B - Reproduction	Discussion	Medium	Medium	Medium	High	F26
Training #3 - Analysis of Interchange	Discussion -- Production	Medium	High	Medium	Medium	F34
Term Paper	Production	Low	Medium	High	Low	G
Post-test #1 - Desert Survival	Discussion	High	High	Medium	High	F39
Post-test #2A[2] - Lego Man	Problem Solving	High	High	Medium	High	F42,43
Post-test #2B - Lego Figure	Problem Solving	High	High	Medium	High	F42,44
Post-test #3 - Supervision	Discussion	Low	High	Medium	High	F46
Post-test #4 - Film	Production	Low	Medium	High	Low	F48

[1,2] It will be noted that two different tasks were used for training task #2 and post-test task #2. This was done because there was an indication from the students that task information was being passed from either, or both, the E1 and E2 classes to the E3 class. Consequently, the E3 class was given the "B" tasks in an effort to circumvent any advantage that they might have gained from the E1 and E2 classes' task experiences.

As is indicated in Table IV the post-test tasks, as well as those preceding them, were comprised of production, discussion and problem-solving type tasks. The degree of structure in the tasks, as reflected in the decision verifiability, solution specificity, and goal clarity of them, tended to be higher than many of the tasks which real-life teams would be called upon to do. However, this was a necessary consequence of the desire to generate precise measurements of team productivity.

Like many real-life teams, there was a delay between the time a team performed a task and the time when they received feedback upon their task productivity. In most cases this delay was between two and seven days.

Cohesiveness Measure

Mikalachki (1969) used Seashore's instrument in a study of thirty-seven work groups and reported an internal consistency reliability for the questions of .979 (p. 99). (Significant at .001 level of confidence).

The instrument has not been checked for reliability over time.

The questions and the values assigned to each answer appear in Appendix I 1. A high numerical value was assumed to reflect high cohesiveness.

Internal Criteria Measurements

At the completion of pretest task #3, team members responded to a twelve-item questionnaire which was designed to measure the members' perceptions of their within-team communications in relation to pretest task #3. This instrument (Appendix F 7) was constructed by the writer and was used to determine whether or not there were any differences between teams, in member perceptions of their communication functioning in relation to pretest task #3, following the communications training.

The post-test survey (Appendix I 2) contained the cohesiveness measure (questions 1 - 5); an assessment of contact hours of team members (questions 6 - 7); and five items (questions 8 - 12) from the pretest survey. It was administered at the conclusion of week XI.

The details concerning the numerical values assigned to the specific post-test questions are contained in Appendix I 3. In all cases high numerical values were judged to reflect:

1. Higher cohesiveness (questions 1 - 5).
2. Greater member contact (questions 6 - 7).
3. More positive internal team functioning (questions 8 - 12). The evaluation of positive or negative in this instance was based on whether it was congruent or incongruent with the inherent value system within the communication training.

Personal and Task Openness

Team interactions on four of the tasks were audio taped. The tasks taped were pretest tasks #1 and #2, post-test task #1, and post-test task #3.

On each task, two, three-minute segments from each teams' tape was selected for scoring. The segments were randomly selected in such a way as to ensure that both within, and between experimental conditions, the number of first three minutes of interaction, second three minutes of interaction, third three minutes of interaction and so on, were equally represented.

The tape scoring system has been previously discussed and appears in Appendix J.

Prior to scoring the tapes for this project, the scorer, one of the instructors, and the writer separately scored three, three-minute tape segments which had been transcribed. They then sat down together to work through those interactions (approximately 20 percent) which all three had not scored the same.

Following this, the individuals scored a different three-minute segment directly from the tape with the following results:

TABLE V

TAPE SCORING RESULTS

Scorer	Interaction Classification			
	Task-Impersonal	Task-Personal	Nontask-Impersonal	Nontask-Personal
Instructor	81.94%	18.06%	0%	0%
Writer	82.08%	17.92%	0%	0%
Scorer	83.94%	16.06%	0%	0%

The degree of agreement between the scorer, instructor, and writer on the classification of the interactions was judged to be sufficiently high to permit the scorer to proceed to score the tapes and thus provide the data necessary to test Hypothesis III.

STATISTICAL PROCEDURES

The methods followed in testing the hypotheses are described in this section. Data analyses were completed using an IBM 360/67 computer at The University of Alberta.

Pretest Measures

A two-way analysis of variance was run on the productivity measures of pretest tasks #1 and #2 to determine if the random assignment of teams and conditions had, in fact, resulted in teams of comparable ability.

A two-way analysis of variance was also run on pretest task #3 and the pretest survey responses to determine if the teams within the three experimental conditions were comparable, in their understanding of the communication skills and their perceptions of their within team communication, after the communication training.

Figure 2 graphically represents the layout of a two-way analysis of variance.

FIGURE 2

TWO-WAY ANALYSIS OF VARIANCE DESIGN

Class	Experimental Condition		
	Structured-Feedback	Unstructured-Feedback	No Feedback
E 1			
E 2			
E 3			

Training Task Measures

Task-productivity measures on all three training tasks except #2 B were analyzed by by means of a two-way analysis of variance as represented by Figure 2. A one-way analysis of variance was employed in relation to training task #2 B, as this task was done only by the E 3 class.

It was believed that these analyses, particularly on the latter tasks, might begin showing trends in support of Hypothesis I. Alternatively, any trends might merely reflect different positions of the training conditions on a learning curve. As Wagner (1965) demonstrated there appears to be a real danger of teams, in early learning stages, overcompensating on the following task as a result of process information gained in relation to performance on the immediately preceding task.

Post-Test Measures

Hypothesis I concerned the relative task productivity of SFB, UFB, and NFB teams.

For post-test tasks #1 and #2, this was tested by analyzing the productivity scores by means of a two-way analysis of variance.

On post-test tasks #3 and #4 the teams were arranged in both intact and ad hoc conditions, and a three-way analysis of variance was used. For this three-way analysis the scores from E 1 and E 2 classes were collapsed into one cell as the number of teams in each condition (4) in the E 1 class made it impossible to place each individual in an ad hoc group composed of individuals with whom he had no team-building history. Table VI shows the results of collapsing the cells.

Hypothesis II concerned the relative task productivity of the SFB, UFB, and NFB teams in both intact and ad hoc conditions. This hypothesis was tested utilizing the productivity scores from post-test tasks #3 and #4 of the six types of teams in a one-way analysis of variance.

TABLE VI

NUMBER OF TEAMS PER CONDITION FOR

THREE-WAY ANALYSIS OF VARIANCE

Class	Condition					
	Intact			Ad Hoc		
	SFB	UFB	NFB	SFB	UFB	NFB
E 1 and E 2	7	7	7	3	3	3
E 3	4	4	4	3	3	3

Hypotheses III concerned the task and personal openness of the SFB and UFB teams. A two-way analysis of variance was planned for the tape-score data, however, for reasons that will be explained later, it was never done.

Hypothesis IV (cohesiveness) was tested utilizing a two-way analysis of variance. The other items in the post-test survey which contained the cohesiveness measure were also analyed using this method.

CHAPTER VI

RESULTS

This chapter will report the results in four stages. First, the results from the assessment of team productivity (Hypotheses I and II); secondly from the tape analysis of the teams' interactions (Hypothesis III); thirdly from the measures of team cohesiveness (Hypothesis IV); and lastly, as supplementary information, team responses to the pre and post-test surveys.

A summary of the results appears in Table XXXII on page 86. In all instances, a finding was regarded as statistically significant only if the chances of the results being solely due to sampling error was equal to, or less than, five in one hundred. (i.e. if $p. \leq .05$).

A summary of the means and standard deviations of team scores on each of the tasks appear in Appendix L.

PRETEST PRODUCTIVITY RESULTS

1. Pretest Task #1 (Tinker Toy Tower)

As Table VII indicates, there was no significant difference between SFB, NFB, and UFB teams in relation to their productivity, as measured by Pretest Task #1. There was, however, a significant interaction (p. = .015) between the class to which the teams belonged and their assigned feedback condition. When charted, this interaction showed that the E 3 class NFB teams performed less well than the UFB teams in their class. The opposite was true for the other two classes.

TABLE VII

SUMMARY OF RESULTS OF TWO-WAY ANALYSIS OF VARIANCE ON PRETEST TASK #1

Source	df	MS	F	p
Classes (A)	2	962.15	3.16	.052
Feedback Types (B)	2	286.48	0.94	.397
A x B	4	1049.22	3.45	.015*

In view of the fact that no training had occurred at this point and that there were no significant differences between feedback types or classes, this significant interaction finding did not threaten the interpretation that the random assignments had produced teams of approximately equal productivity ability.

2. Pretest Task #2 (Farm Problem)

TABLE VIII

SUMMARY OF RESULTS OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM SCORES ON PRETEST TASK #2

Source	df	MS	F	p
Classes (A)	2	8935.10	1.43	.24
Feedback Type (B)	2	2425.13	0.38	.67
A x B	4	4025.35	0.64	.63

As indicated in Table VIII, there were no significant differences either between teams in the three feedback conditions or between the classes on pretest task #2.

3. Pretest Task #3 (Quiz on Communication Concepts)

TABLE IX

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE
OF TEAM SCORES ON PRETEST TASK #3

Source	df	MS	F	P
Classes (A)	2	2722.07	4.87	.01*
Feedback Type (B)	2	399.19	0.71	.49
A x B	4	660.93	1.18	.33

As the above table indicates, there were no significant differences between the SFB, UFB, and NFB teams on their quiz performance. Thus, the conclusion may be drawn that the communication training did not have a differential impact upon the team types in terms of their understanding of the communication concepts. Likewise, as the following table indicates, the training did not have a differential impact in this regard upon the SFB, UFB, and NFB teams in terms of the average of their member's individual understanding.

It will be noted that in both analyses of Pretest Task #3, that there were significant differences between classes. A Scheffé comparison on the first analysis indicated that E 2-class teams scored significantly high (p = .01) on the test than E 3-class teams. These two classes were similarly different (p = .000) in the average score of individual team members. These differences were likely due to the fact that different instructors were teaching these day-time classes.

TABLE X

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF PRETEST TASK #3
TEAM SCORES WHICH HAD BEEN CALCULATED BY AVERAGING
THE INDIVIDUAL MEMBERS SCORES

Source	df	MS	F	p
Classes (A)	2	15230.52	11.22	.000*
Feedback Type (B)	2	522.11	0.38	.68
A x B	4	643.86	0.47	.75

Summary of Conclusions Based on Pretest Data

1. The SFB, UFB, and NFB teams were equal in their task productivity both before and after the communication training.
2. The communication training did not have differential impact upon teams, in the three experimental conditions.

TRAINING TASKS

1. Training Task #1 (Parasol Problem)

TABLE XI

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY ON TRAINING TASK #1

Source	df	MS	F	p
Classes (A)	2	6.13	0.06	.93
Feedback Types (B)	2	118.45	1.22	.30
A x B	4	95.85	0.99	.42

As the table above indicates, there were no differences in team productivity either between conditions or classes on Training Task #1.

2. Training Task #2 A (Office Site)

This task was done by the E 1 and E 2 teams. The results of the analysis appear in Table XII.

TABLE XII

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY ON TRAINING TASK #2 A

Source	df	MS	F	p
Classes (A)	1	1.08	0.31	.57
Feedback Types (B)	2	11.35	3.33	.052
A x B	2	6.82	2.00	.15

As indicated by Table XII, differences between feedback types (SFB, NFB, and UFB teams) were almost statistically significant (p = .052). An inspection of the means revealed that NFB teams with a mean of 1.75 were the most productive on this task, followed by SFB (3.33), and UFB teams (3.83).

3. Training Task #2 B (Reproduction)

A one-way analysis of variance of E 3 SFB, UFB, and NFB teams' productivity on this task yielded the nonsignificant results summarized in Table XIII.

TABLE XIII

SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE OF
E 3 SFB, UFB, AND NFB TEAM PRODUCTIVITY
ON TRAINING TASK #2 B

Source	df	MS	F	p
Groups	2	4.00	2.86	.08
Error	18	1.40		

In view of the p of .08 the means were inspected and revealed that the UFB teams were the most, the NFB teams the second most, and the SFB teams the least, productive.

4. Training Task #3 (Analysis of Interchange)

TABLE XIV

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY ON TRAINING TASK #3

Source	df	MS	F	p
Classes (A)	2	74.77	4.22	.02*
Feedback Types (B)	2	11.41	0.64	.52
A x B	4	25.19	1.42	.24

As the above table indicates there were no significant differences in productivity on this task between the SFB, UFB, and NFB teams. The significant difference between classes, shown in the table, was examined using a Scheffé comparison and revealed that E 3 teams were more productive on this task than the E 1 teams (p = .03).

5. Team Paper

As the team papers were handed in at the conclusion of the training tasks, they might themselves be regarded as production tasks of teams undergoing team building. An inspection of Table XV reveals that there were no differences either between classes or SFB, UFB, and NFB teams in terms of their productivity on the team paper.

TABLE XV

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM PERFORMANCE ON TEAM PAPER

Source	df	MS	F	p
Classes (A)	2	.6390	.4964	.61
Feedback Types (B)	2	.4242	.3296	.72
A x B	4	.8126	.6313	.64

In summary, team performance on the training tasks and the team paper did not reveal any differences between the SFB, UFB, and NFB teams.

POST-TEST MEASURES

Hypothesis I

Hypothesis I was tested using the productivity data from all four post-test tasks.

1. Post-Test Task #1 (Desert Survival)

The within-team resources available to teams on this task were assessed using a two-way analysis of variance on the team scores which had been derived by averaging the individual scores of team members. The nonsignificant results appear in Table XVI.

TABLE XVI

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE
OF WITHIN-TEAM RESOURCES IN RELATION
TO POST-TEST TASK #1

Source	df	MS	F	p
Classes (A)	2	14216.67	2.38	.10
Feedback Type (B)	2	461.00	0.07	.92
A x B	4	4678.31	0.78	.54

These results were interpreted as indicating that no significant differences existed, either between classes or SFB, UFB, and NFB teams, in the accuracy of information available to teams in relation to this task. Consequently, any differences in team scores could not be attributed to differences in information.

The team score results appear in Table XVII.

TABLE XVII

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF
TEAM PRODUCTIVITY ON POST-TEST TASK #1

Source	df	MS	F	p
Classes (A)	2	6862.19	0.56	.57
Feedback Types (B)	2	8889.79	0.72	.48
A x B	4	10610.99	0.86	.49

These results indicate that there were no differences in productivity between SFB, UFB, and NFB teams, and are contrary to Hypothesis I.

A third two-way analysis of variance was run on this task to assess how the teams performed in relation to their most accurate individual member. The results appear in Table XVIII.

TABLE XVIII

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY AS CONTRASTED TO THEIR MOST PRODUCTIVE INDIVIDUAL MEMBER

Source	df	MS	F	p
Classes (A)	2	3.43	0.03	.96
Feedback Types (B)	2	78.65	0.74	.48
A x B	4	56.88	0.53	.70

Once again the results are contrary to Hypothesis I in that there were no significant differences between SFB, UFB, and NFB teams in their team performance in relation to their most productive member. Hence, the conclusion was drawn that there were no differences in the teams[1] productive use of their best resource.

---

[1] The procedure for calculating scores for this analysis is in Appendix F 41.

2. Post-Test Task #2 (Lego Assembly)

As previously noted, two different lego assembly problems were used in order to frustrate any attempts to pass task information between teams from different classes.

The E 1 and E 2 teams constructed the lego man (Appendix F 41) and the results of the analyses of their productivity scores in assembling, and in planning and assembling, are contained in Tables XIX and XX respectively.

TABLE XIX

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF
LEGO ASSEMBLY TIME FOR E 1 AND E 2 TEAMS

Source	df	MS	F	p
Classes (A)	1	5.67	0.00	.98
Feedback Types (B)	2	10651.51	0.92	.41
A x B	2	11506.86	1.40	.27

TABLE XX

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF PLANNING
AND ASSEMBLY TIME FOR E 1 AND E 2 TEAMS

Source	df	MS	F	p
Classes (A)	1	7.92	0.00	.97
Feedback Type (B)	2	11138.58	1.70	.20
A x B	2	13023.12	1.99	.16

The analyses revealed no significant differences between SFB, UFB, and NFB teams on either measure.

The E 3 teams constructed the lego figure (Appendix F 42) and the results of the analyses of the relevant measures are summarized in Tables XXI and XXII.

TABLE XXI

SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE FOR LEGO FIGURE ASSEMBLY TIME OF E 3 SFB, UFB, AND NFB TEAMS

Source	df	MS	F	p
Groups	2	24175.87	1.86	.18
Error	18	12972.83		

TABLE XXII

SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE OF PLANNING AND ASSEMBLY TIME FOR E 3 TEAMS

Source	df	MS	F	p
Groups	2	2547.50	.46	.63
Error	18	5492.44		

Again the results indicate that there were no differences between the teams on either measure and are therefore contrary to Hypothesis I.

In terms of trends, the SFB and UFB teams both outperformed the NFB teams.

3. Post-Test Task #3 (Supervision)

TABLE XXIII

SUMMARY OF RESULTS OF THREE-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY ON POST-TEST TASK #3

Source	df	MS	F	p
Classes (A)	1	0.5276	0.4696	.03*
Feedback Type (B)	2	0.1149	0.1023	.36
A x B	2	0.5507	0.4902	.61
Intact vs Ad Hoc (C)	1	0.4822	0.4292	.51
B x C	2	0.2947	0.2624	.08
A x C	1	0.2399	0.2136	.15
A x B x C	2	0.1911	0.1701	.84

As an inspection of Table XXIII shows, there were no significant differences in productivity between SFB, UFB, and NFB teams.

The only significant finding concerned the greater productivity (p = .03) of the combined E 1 and E 2 teams in relation to teams from the E 3 class.

4. Post-Test Task #4 (Film)

TABLE XXIV

SUMMARY OF THE RESULTS OF THREE-WAY ANALYSIS OF VARIANCE OF TEAM PRODUCTIVITY ON POST-TEST TASK #4

Source	df	MS	F	p
Classes (A)	1	0.5958	0.2111	.15
Feedback Type (B)	2	0.7859	0.2785	.07
A x B	2	0.7338	0.2600	.77
Intact vs Ad Hoc (C)	1	0.9713	0.3442	.07
B x C	2	0.4799	0.1700	.19
A x C	1	0.1499	0.5315	.47
A x B x C	2	0.4822	0.1708	.84

No significant differences between, (1) SFB, UFB, and NFB teams, (2) classes, or (3) intact and ad hoc teams were found on this task.

The two measures in Table XXIV which had a p = .07 reflect a tendency of the intact teams to be more productive than the ad hoc teams and the productivity of the UFB teams to be superior to the NFB teams who were in turn superior to the SFB teams.

On the basis of the team productivity data contained in this experiment, Hypothesis I was clearly rejected.

Hypothesis II

Hypothesis II concerned differences between SFB, UFB, and NFB teams in both intact and ad hoc conditions. The results of the one-way analysis of variance on productivity results from post-test task #3 appear in Table XXV.

TABLE XXV

PRODUCTIVITY OF INTACT AND AD HOC SFB, UFB, AND NFB TEAMS ON POST-TEST TASK #3

Source	df	MS	F	p
Groups	5	1.60	1.29	.28
Error	45	1.24		

As indicated in Table XXV no significant differences were found between the six types of teams.

A similar analysis was conducted in relation to post-test task #4 and the results appear in Table XXVI.

TABLE XXVI

PRODUCTIVITY OF INTACT AND AD HOC SFB, UFB, AND NFB TEAMS ON POST-TEST TASK #4

Source	df	MS	F	p
Groups	5	71.45	2.70	.03*
Error	45	26.50		

The significant finding (p = .03) represented the superior productivity of the intact UFB teams over that of the ad hoc SFB teams. This finding was contrary to Hypothesis II.

Table XXVII compares the hypothesized productivity and the actual productivity of the teams on post-test task #3 and #4. The teams are rank-ordered from highest to lowest productivity.

TABLE XXVII

COMPARISON OF HYPOTHESIZED AND ACTUAL PRODUCTIVITY
OF TEAMS ON POST-TEST TASKS #3 AND #4

Teams	Hypothesized Ranking	Actual Ranking and Mean on Post-Test Task #3	Actual Ranking and Mean on Post-Test Task #4
SFB Intact	1	5 (2.63)	3 (18.36)
SFB Ad Hoc	2	1 (1.66)	6 (13.83)
UFB Ad Hoc	3	3.5 (2.09)	1 (22.90)
UFB Intact	4	6 (3.00)	4 (17.83)
NFB Intact	5	3.5 (2.09)	5 (17.54)
NFB Ad Hoc	6	2 (2.00)	2 (18.83)

As is evident from Table XXVII no consistent trends are apparent. In view of the fact that only one significant difference between teams was found in relation to tasks #3 and #4, and that that difference was contrary to the hypothesis, Hypothesis II was clearly rejected.

Hypothesis III

Hypothesis III concerned the personal versus task openness of the SFB and UFB teams. In the scoring system used, interactions were classified into one of the four following categories:

1. Task-relevant impersonal
2. Task-relevant personal
3. Nontask-relevant impersonal
4. Nontask-relevant personal

The plan was to score two three-minute segments of the interactions of each team, on each of their two pretest and post-test tasks which were recorded. In view of the amount of time and money involved in scoring 408 tape segments, it was decided to make a preliminary inspection of the data. Tape segments from teams under all conditions and from each task were randomly selected from the tape-analysis table that had been prepared. In all, 56 three-minute segments from the tasks were scored.

An inspection of these tape scores showed few differences and no trends between teams under the various conditions and therefore no further tapes were scored. The heavy task focus of the teams was, however, clearly evident as only three of the 42 post-test task tapes scored contained interactions that were classified as nontask interactions.

Hypothesis III was therefore rejected.

Hypothesis IV

Hypothesis IV concerned differences in cohesiveness of the SFB and UFB teams in relation to the NFB teams. A *t* test was performed on the combined cohesiveness scores of the SFB and UFB teams in relation to the NFB team scores. The results appear in Table XXVIII.

TABLE XXVIII

COHESIVENESS OF SFB AND UFB TEAMS CONTRASTED WITH THAT OF NFB TEAMS

	Teams		
	SFB and UFB		NFB
Number	34		17
Mean	145.18		150.82
S.D.	16.21		21.28
df		49	
t		-1.055	
Probability (one-tailed)		.14	

The results (p = .14) were not statistically significant and therefore Hypothesis IV was rejected.

Internal Criteria Measures

The results, in terms of the formal hypotheses are complete; however, the results from the pre and post-test team surveys are presented here as supplementary information.

The pretest survey (Appendix K) was administered in week VIII. A single team score for the pretest survey was calculated by averaging the individual team members' responses to each question and summing the twelve resulting scores. The results are summarized in Table XXIX.

TABLE XXIX

SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM RESPONSES TO THE PRETEST SURVEY

Source	df	MS	F	p
Classes (A)	2	3444.53	4.90	.01*
Feedback Type (B)	2	77.74	0.11	.89
A x B	4	559.52	0.79	.53

No significant differences were found between the SFB, UFB, and NFB teams. The E 2 class teams did, however, score significantly higher (p = .01, Scheffé) than the teams from the E 3 class.

High scores were interpreted as meaning that team members saw their internal team functioning with regard to pretest task #3 as more congruent with the communication lessons' value system than teams who scored lower.

An item-by-item analysis was also made and the results are summarized in Table XXX.

It will be noted from this table that the only significant difference between the SFB, UFB, and NFB teams was in response to the question, "How even (e.g., similar) was participation among team members while doing the communication task?" A Scheffé comparison revealed that UFB teams reported more evenness in participation than the SFB teams (p = .01).

TABLE XXX

SUMMARY OF RESULTS OF TWO-WAY ANALYSIS OF VARIANCE OF TEAM RESPONSES TO INDIVIDUAL PRETEST SURVEY QUESTIONS

Question Content[1]	p for Classes (E 1 vs E 2 vs E 3)	p for Feedback Type (SFB vs UFB vs NFB)
1. Satisfaction with consideration of ideas	.10	.45
2. Enthusiasm of team re task	.44	.39
3. Evenness of participation of members	.000*	.009*
4. Differences of opinion ignored	.10	.48
5. Feelings of hurt, frustration, etc.	.02*	.28
6. Amount of blocking behavior	.000*	.24
7. Feelings of responsibility for productivity	.08	.65
[illegible]. Directness of feedback	.17	.57
9. Amount of active listening	.29	.89
10. Impact of communication skills	.14	.45
11. Winning of own points	.002*	.28
12. Amount of process analysis	.16	.26

Differences between classes were reported on questions, 3, 5, 6, and 11. Scheffé contrasts revealed that the E 2 class teams reported more evenness of participation (p =.0001), less feelings of hurt and frustration (p = .02), and less blocking behavior (p = .000) than the E 3 class teams. Similarly the E 2 teams reported less blocking behavior (p = .01) and less tendency for members to be out to win their own points (p = .002) than E 1 teams.

While differences between classes were of minor interest in this project, they do suggest that the instrument was sensitive enough to pick up differences.

---

[1] The specific questions and scoring procedure appear in Appendix K 2.

The post-test survey (Appendix I 2) was administered in week XI. The first five questions of the survey constituted the cohesiveness measure and has been previously reported. The analysis of the responses to questions number six through twelve appear in Table XXXI.

TABLE XXXI

SUMMARY OF THE RESULTS OF TWO-WAY ANALYSIS OF VARIANCE
OF TEAM MEMBER RESPONSES TO POST-TEST SURVEY
QUESTIONS 6 THROUGH 12

Question Content[1]	P
6. Frequency of out-of-class team meetings	.75
7. Duration of out-of-class team meetings	.77
8. Differences of opinion ignored	.49
9. Feelings of hurt, frustration, etc.	.07
10. Amount of active listening	.68
11. Winning of own points	.002*
12. Satisfaction with consideration of ideas	.20

The only statistically significant difference in the responses to post-test questions of SFB, UFB, and NFB teams was in relation to question 11. A Scheffé contrast revealed that UFB teams reported that they perceived their members as being significantly less ($p = .02$) out to win their own points during team discussions than the SFB teams viewed the SFB members.

---

[1] The specific questions and scoring procedure appear in Appendix I 3.

Table XXXII summarizes the results of the statistical treatments of the data in this experiment.

Summary of Results

The following summarizes the results in point form.

1. The SFB, UFB, and NFB teams were of comparable task-productivity ability both before the communications training, immediately after it, and throughout the team-building activities.
2. There were no differences between the SFB, UFB, and NFB teams in their understanding of the communication concepts.
3. Hypothesis I, that SFB-trained teams would demonstrate higher team productivity on all post-test experimental tasks than UFB teams, and that UFB teams would in turn demonstrate a similar superiority over NFB teams, was clearly rejected on all four post-test tasks. There were no significant differences between these teams.
4. Hypothesis II, that teams would demonstrate higher team productivity on all post-test tasks over all teams listed below them
   (a) Intact SFB teams.
   (b) Ad hoc teams composed of SFB-trained individuals.

TABLE XXXII

SUMMARY OF RESULTS

TASKS - MEASURES	p. for SFB vs. UFB vs. NFB	TRENDS
Pretest #1	.39	
Pretest #2	.67	
Pretest #3		
(a) Average score of individuals	.68	
(b) Team Score	.49	
Pretest Survey		
Total	.89	
#1	.45	
#2	.39	
#3	.009*	UFB communications more even than SFB
#4	.48	
#5	.28	
#6	.24	
#7	.65	
#8	.57	
#9	.89	
#10	.45	
#11	.28	
#12	.26	
Team Paper	.72	
Training #1	.30	
Training #2A (E1 and E2)	.052	NFB more productive than SFB. SFB more productive than UFB
Training #2B (E3)	.08	UFB more productive than NFB. NFB more productive than SFB
Training #3	.52	

TABLE XXXII continued

TASKS - MEASURES	p. for SFB vs. UFB vs. NFB	TRENDS
Post-test #1		
(a) Average score of individuals	.92	
(b) Team Score	.48	
(c) Re best Member	.48	
Post-test #2A		
(E1 and E2)		
(a) Assembly	.41	
(b) Planning and Assembly	.20	
Post-test #2B		
(E3)		
(a) Assembly	.18	
(b) Planning and Assembly	.63	
Post-test #3	.36	
Post-test #4	.07	UFB more productive than NFB. NFB more productive than SFB
Post-test Survey		
#6	.75	
#7	.77	
#8	.49	
#9	.07	NFB reported less feelings of hurt, frustration, etc. than UFB. UFB less frustrated than SFB
#10	.68	
#11	.002*	UFB less out to win own points than SFB
#12	.20	
Cohesiveness		
SFB+UFB vs. NFB	.14	
Post-test #3		
SF-I, SF-AH, etc.	.28	
Post-test #4		
SF-I, SF-AH, etc.	.03*	Intact UFB teams more productive than ad hoc SFB teams

(c) Ad hoc teams composed of UFB-trained individuals.

(d) Intact UFB teams.

(e) Intact NFB teams.

(f) Ad hoc teams composed of NFB-trained individuals,

was rejected on both tasks which compared all six types of teams. Only one significant difference between two teams was found and that was in a direction contrary to the hypothesis.

5. Hypothesis III, that a tape analysis of UFB-team interactions would produce higher personal and lower task scores than a similar analysis of SFB team interactions, was rejected. No significant differences were found in the tape analysis comparing SFB, UFB, and NFB teams in relation to task and personal interactions. The tape analysis indicated that team interactions were almost exclusively task-oriented.

6. Hypothesis IV, that SFB and UFB teams would be more cohesive after training than the NFB teams, was rejected. No significant differences between the teams were found.

CHAPTER VII

DISCUSSION OF RESULTS

From the point of view of those consultants who utilize process analysis as part of their team-building activities for new teams, the results of this study provide little in the way of encouragement. At best it might be said that there is no evidence from this study that such team-building activities are dysfunctional to team productivity.

There is a slight indication that the type of training provided in this experiment might, with further development, be shown to have a positive impact upon team functioning and team productivity.

Comparison Teams

In addition to the three Organization Theory 303 classes which have been reported in this study, a fourth 303 class which was taught by a different instructor, did pretest task #1, training task #2 A, post-test tasks #2 A and #3, and the post-test survey. This fourth class was composed of 111 students formed into 18 teams with an average of 6.16 students per team and a team membership range of 5 - 7. These teams, which were comparably traditioned to the experimental teams, could be regarded as comparison teams.

During their course, the comparison teams completed five surveys (Appendix H) which the instructor tabulated into team profiles and returned to the teams. In only one instance did the instructor make specific written suggestions to the teams about issues that the survey data indicated needed their team attention. The type of feedback which these teams received on their task performances and survey responses suggests that their training condition could be described as one of data handback.

These teams did not receive any training in interpersonal communication or problem solving.

A summary of the results of the t tests which were run on the task productivity and survey data which the experimental and comparison teams had in common appear in Table XXXIII.

As will be noted from Table XXXIII, in those instances where productivity trends were evident, they showed a tendency of the experimental teams to be more productive than the comparison teams. The only statistically significant differences occurred in the post-test survey where the experimental teams reported more cohesiveness and more positive within-team communications than the comparison teams.

These results are seriously threatened by several factors. The comparison class members were not randomly assigned to teams nor was the class itself randomly assigned to a control condition. The comparison teams had, on the average, more members per team and they were taught by a different instructor. In addition, the experimental teams had previously responded to items eight through twelve on the post-test survey, when they did the pretest survey. These items were new to the comparison teams.

In spite of these severe limitations, the comparative results from the experimental and control teams encourages this writer to believe that with more work, the functionality of training in interpersonal communication and process analysis upon a team's productivity could be demonstrated.

TABLE XXXIII

SUMMARY OF t TESTS COMPARING EXPERIMENTAL AND COMPARISON TEAMS

Task - Survey	t (E vs. C) (one-tailed)	E Class Means	E Class S. D.	E Class Number	C Class Means	C Class S. D.	C Class Number	Trend
Pretest #1 - Tinker Toy	.29	30.16	19.75	51	33.11	21.01	18	
Training #2 A - Office Site	.07	2.93	2.00	30	3.78	1.70	18	E more productive
Post-Test #2 A[1] - Lego Man								
Assembly	.12	2.50	1.31	30	3.06	1.76	18	E more productive
Planning plus Assembly	.31	3.13	1.07	30	2.94	1.47	18	
Post-Test #3 - Supervision	.33	2.25	1.13	51	2.11	1.41	18	
Cohesiveness	.04*	14.7	1.80	51	13.8	2.37	18	E more cohesive
Post-Test Survey								
#8	.001*	3.15	.47	51	2.76	.47	18	E ignored difference of opinion less
#9	.03*	3.81	.56	51	3.48	.81	18	E reported less feelings of hurt, frustration, etc.
#10	.01*	3.17	.49	51	3.48	.54	18	E did more active listening
#11	.01*	3.41	.59	51	3.03	.60	18	E less out to win own points
#12	.000*	4.04	.44	51	3.61	.54	18	E more satisfied with consideration given to ideas

[1] Two of the eighteen comparison teams gave up and did not complete this task. This was true of only one of the experimental teams. In view of this, the data were rearranged (Appendix F 45) so that the performance of these three teams were included in this analysis.

WEAKNESSES OF THE STUDY

The central concern of this study was not the relative merits of the comparison and experimental teams. It was the testing of the hypotheses stated in Chapter IV. Possible reasons for the failure to have any of the hypotheses confirmed and the weaknesses of the study itself will be discussed by taking a look at the population studied, the training conducted, the motivation of the students, and the nature of the tasks.

Study Population

The population was, of course, university students enrolled in an undergraduate business course. The inclusion of the evening class in the study did, however, mean that a broader age range was represented than would usually be true in studies only utilizing students from undergraduate day-time classes. Consequently, the potential for generalizing the results was increased.

It would, however, be unwise to suggest that the results can be generalized to team building with new staff teams, as it is likely that a staff team would approach and use the team training differently than the students did.

For example, the student-team members had no control over who their fellow team members were and likely saw their team-member relationships as important only for the length of the course. Staff-team members, on the other hand, would have an expectation of more enduring member relationships and consequently would likely be more motivated to both work on their team relationships and to work through team issues than were the student teams.

Training

The length of time devoted to the training of teams in the different types of feedback was very short in comparison to the other course activities. The SFB and UFB teams were only given four class periods to process their experiences together in either a "structured" or "unstructured" manner. The NFB teams were given the same four periods to do whatever their team felt would contribute to their achievement of the course objectives.

The assumption was that teams who had received up to five hours of experiential training in a particular type of feedback would (1) actually engage in the type of feedback suggested in the training directions; and (2) use the suggested type of feedback in relation to their ensuing team activities.

There is, unfortunately, no evidence on whether or not teams utilized the type of feedback in which they had been "trained" in relation to their subsequent activities. In relation to the first point there is one piece of anectodal evidence indicating that at least one team did not use the feedback instrument in a serious way.

In their team paper a SFB team reported that some team members were bored with the team surveys conducted after the tasks and that . . . "after the first one [survey] some people stated that they put down the least offensive answers, not what they actually thought."

Other comments in this team paper indicated that some members were beginning to resent the amount of time which they were spending on the course and consequently saw the surveys as something to rush through and be done with as quickly as possible.

Consequently, the feedback training itself may have failed to produce distinct SFB, NFB, and UFB teams because it was too brief and/ or teams did not, or were unable to, utilize it to develop themselves into teams which actually processed their functioning by means of either "structured" or "unstructured" feedback.

It should also be noted that it is unlikely, given the nature of the team paper and the content and reading list of the course, that NFB teams never engaged in feedback.

Thus, a very serious criticism of the project and its design would be its failure to provide evidence that the training was capable of teaching teams to process their experiences in either a structured or unstructured manner, and that it had, in fact, produced teams who did so.

Student Motivation

In the brief discussions regarding the nature of the experimental population and the training, a common thread has emerged in terms of possible differences between the student teams and new staff teams in their attitude towards, and utilization of, the training activities.

There was little doubt in the minds of the writer and instructors that the direct relation of course marks to task productivity resulted in the student teams being highly focussed on, and motivated toward, performance on the tasks. Indeed, it is the writer's opinion that this task-productivity motivation was so powerful that it is possible that it may have overridden the impact of the different feedback-training activities.

From the students' point of view productivity on the training tasks was very important as it had direct impact upon their course marks. If they did not experience the feedback-training activities as being relevant for, and/or directly contributing to their improved productivity, it is likely that they would not expend much energy in relation to such activities. New staff teams, on the other hand, would not likely experience such a powerful motivation to produce while undergoing training and would, in comparison to the student teams, expend more energy in assimilating and using the content of the training.

Tasks

The writer attempted to secure tasks for this experiment which had high decision verifiability and high solution specificity so that the measures of team productivity would be objective. As Table IV (p. 57) indicates, there is much room for improvement in this regard for the majority of tasks used.

It was assumed that a team's performance on the tasks would be a direct reflection of the quality of their internal processes. In retrospect, this assumption, particularly with those tasks having less than high decision verifiability, needs to be examined closely. In the writer's view the tinker toy and lego tasks came closest to reflecting the quality of a team's processes because they involved both the development and implementation of a plan which could be accurately measured, and whose quality was easily verified. The writer is much less confident that the teams' performances on the other tasks directly reflected the quality of their internal processes.

Thus, most of the measures used to test the productivity hypotheses may be of questionable validity.

The fact that the teams were under a time constraint of completing the tasks during an 80 minute class period may, in part, account for the heavy task focus which the tape analyses revealed. If this pressure of time was responsible for the heavy task focus, the removal of it would be essential in order to obtain an undistorted test of hypothesis III.

In summary, inferences from the results of this student-team project should not be made to new staff teams, undergoing similar training, without extreme caution. There are important differences between these types of teams and serious weakness within the study itself.

Suggestions for Further Research

On the basis of the experience gained in this project, the writer offers the following suggestions for improving the design of such a study. It is his view that it is still very important to assess the impact of team building upon a team's productivity in a rigorous and replicable experiment. Further, adjustments in the design of the present study would permit this to be done in such a way that the generalizability of the results could be improved. These suggestions are outlined below in point form.

1. If the study were to be repeated utilizing university classes, it is suggested that it extend over a longer period of time, preferably over two semesters. The assumption underlying

this suggestion is that the responses to the situation and training on the part of student teams would be different if they saw their team relationships extending over a longer period of time.

2. The amount of time devoted to training teams in a particular feedback condition should be lengthened and the training assessed as to whether or not it had produced teams who engaged in "structured" as contrasted to "unstructured" feedback activities.
3. The motivation of the teams for task productivity, especially during the training period, should be reduced from what it was in the present study.
4. Measures of productivity should be checked in relation to their validity and ability to reflect the quality of a team's internal processes. It appears that there is a serious shortage of such measures.
5. Measures of productivity should be able to distinguish, at minimum, five different levels of productivity achievement. The chances of discriminating between teams obviously increases with the ability of the measuring instrument to provide a greater variation in scores.

In the present study all post-test tasks with the exception of post-test task #3 had such a capacity. This task only had the capacity to discriminate between three levels of productivity.

6. In measuring a team's interactions, it is important to be aware of, and control if possible, any forces which may distort the nature of the interactions.

   In the present study, time pressure was identified as a possible distorting factor. Its reduction is recommended if measurement of the impact of training upon a team's interactions, while the team is engaged in a task, is desired.

7. A control group which does not engage in any feedback should be introduced.

Unfortunately, the contribution of the present project to resolving the question of the impact of communication and process training upon new staff-team productivity was limited. It did, however, provide useful baseline data and suggestions for further research efforts which, hopefully, will ultimately result in definitive answers to this important question.

BIBLIOGRAPHY

BIBLIOGRAPHY

Argyris, C. Interpersonal competence and organizational effectiveness. Homewood, Ill.:. Dorsey, 1962.

Bartlett, A. C. Changing behavior as a means to increased efficiency. The Journal of Applied Behavioral Science, 1967, 3, 381-403.

Beckhard, R. An organization improvement program in a decentralized organization. The Journal of Applied Behavioral Science, 1966, 2, 3-27.

Beckhard, R. Organization development: strategies and models. Reading, Mass.: Addison-Wesley, 1969.

Beckhard, R. & Lake, D. G. Short and long-range effects of a team development effort. In H. A. Hornstein et al (Eds.), Strategies of social intervention. New York: Free Press, 1971.

Bigelow, R. C. Changing classroom interaction through organization development. In R. A. Schmuck & M. B. Miles (Eds.), Organization Development in Schools. Palo Alto, Calif.: National Press Books, 1971.

Blake, R. & Mouton, J. The instrumented training laboratory. In I. Weschler & E. Schein (Eds.), Issues in human relations training. Selected Readings Series No. 5. Washington, D.C.: National Training Laboratories, National Education Association, 1962.

Blake, R. & Mouton J. Building a dynamic corporation through grid organization development. Reading, Mass.: Addison-Wesley, 1969.

Blake, R & Mouton, J. OD-fad or fundamental? Training and Development Journal. 1970, Jan., 9-17.

Borgatta, E. F. & Crowther, B. A workbook for the study of social interaction processes. Chicago: Rand McNally, 1965.

Bowers, D. G. OD techniques and their results in 23 organizations: the Michigan ICL study. The Journal of Applied Behavioral Science, 1973, 9, 21-43.

Buchanan, P. C. Crucial issues in organizational development. In Goodwin Watson (Ed.), Change in School Systems. Washington: National Training Laboratories, 1967.

Buchanan, P. C. Crucial issues in organization development. In H. A. Hornstein et al, (Eds.), Strategies of social intervention. New York: Free Press, 1971.

Buchanan, P. C. & Brunstetter, P. H. A research approach to management development: II. Journal of the American Society of Training Directors, 1959, 13, 18-27.

Burke, W. W. A comparison of management development and organization development. The Journal of Applied Behavioral Science, 1971, 7, 569-579.

Burke, W. W. & Schmidt, W. H. Primary target for change: the manager or the organization. In W. H. Schmidt (Ed.), Organizational frontiers and human values. Belmont, Calif.: Wadsworth, 1970.

Cohen, K. J., Dill, W. R., Kuehn, A. A. & Winters, P. R. The Carnegie tech management game. Homewood, Ill.: Richard D. Irwin, 1964.

Davis, S. A. An organic problem-solving method of organizational change. The Journal of Applied Behavioral Science, 1967, 3 (1), 3-21.

Deep, S. D., Bass, B. M. & Vaughan, J. A. Some effects of business gaming of previous quasi - T-group affiliations. Journal of Applied Psychology, 1967, 51, 426-431.

Delbecq, A. L. The management of decision-making within the firm: three strategies for three types of decision-making. Academy of Management Journal, 1967, 10, 329-339.

Dennis, J. A modified Scanlon Plan as part of an organization development program. Mimeographed, 1964, as reported in P. C. Buchanan. Crucial issues in organization development. In H. A. Hornstein et al, (Eds.), Strategies of social intervention. New York: Free Press, 1971.

Education Research. Decision. Warren, N. J., 1972.

Fosmire, F., Keutzer, C. & Diller, R. Starting up a new senior high school. In Schmuck, R. A. & Miles, M. B. (Eds.), *Organization development in schools*. Palo Alto, Calif.: National Press, 1971.

Fiedler, F. E. A contingency model of leadership effectiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology*. New York: Academic Press, 1964.

Friedlander, F. A comparative study of consulting processes and group development. *The Journal of Applied Behavioral Science*, 1968, 4, 377-399.

Gardner, J. *Self-Renewal*. New York: Harper, 1968.

Gibb, J. R. Tori theory: consultantless team-building. *Journal of Contemporary Business*, 1972, 1 (3), 33-41.

Green, F. N. *The effects of a task-encounter workshop on the administrative staff of a public school system*. Unpublished doctoral dissertation, United States International University, 1970.

Hackman, J. R. Effects of task characteristics on group products. *Journal of Experimental Social Psychology*, 1968, 4, 162-187.

Hall, J. & Williams, M. S. A comparison of decision-making performances in established and ad hoc groups. *Journal of Personality and Social Psychology*, 1966, 3, 214-222.

Hall, J. & Williams, M. S. Group dynamics training and improved decision-making. *The Journal of Applied Behavioral Science*, 1970, 6, 39-68.

Hall, J., Mouton, J. & Blake, R. Group problem-solving effectiveness under conditions of pooling vs. interaction. *Journal of Social Psychology*, 1963, 59, 147-157.

Harley, K. Team development. *Personnel Journal*, 1971, June, 437-443.

Hellebrandt, E. T. & Stinson, J. E. *The general business management simulation*. Athens, Ohio: Follett, 1965.

Hellebrandt, E. T. & Stinson, J. E. The effects of T-group training on business game results. *The Journal of Psychology*, 1971, 77, 271-272.

Hertzburg, F. *Kita, or what have you done for me lately?* Washington: Bureau of National Affairs, 1969.

Hornstein, H. A., Bunker, B. B., Burke, W. W., Hornstein, M. G. & Lewicki, R. J. *Strategies of social intervention*. New York: Free Press, 1971.

Kaplan, A. *The conduct of inquiry: methodology for behavioral science*. San Francisco: Chandler, 1964.

Kegan, D. L. *Trust, openness, and organizational development: short-term relationships in research and development laboratories and a design for investigating long-term effects*. Unpublished doctoral dissertation, Northwestern University, 1971.

Kuriloff, A. H. & Atkins, S. T-group for a work team. *The Journal of Applied Behavioral Science*, 1966, 2 (1), 63-93.

Lafferty, J. C., Eady, P. M., & Pond, A. W. *The desert survival problem*. Detroit: Experiential Learning Methods, 1970.

Leavitt, H. J. Applied organizational change in industry: structural, technological, and humanistic approaches. In J. G. March (Ed.), *Handbook of organizations*. Chicago: Rand McNally, 1965.

Lieberman, M. A., Yalom, I.D., & Miles, M. B. Encounter: the leader makes the difference. *Psychology Today*, 1973, March, 69-76.

Lorge, I., Fox, D., Davitz, J., & Brenner, M. A survey of studies contrasting the quality of group performance and individual performance, 1920 - 1957. *Psychological Bulletin*, 1958, 55, 337-372.

MacMillan Company. The game of farming. In *Manufacturing and agriculture, Unit II*. New York: MacMillan Company, 1967.

Maier, N. R. F. *Principles of human relations*. New York: Wiley, 1952.

Maier, N. R. F., & Zerfoss, L. F. MRP: a technique for training large groups of supervisors and its potential use in social research. *Human Relations*, 1952, 5, 177-186.

Maier, N. R. F. *Problem solving and creativity in individuals and groups*. Belmont, Calif.: Brooks/Cole, 1970.

Mikalachki, A. *Group cohesion reconsidered*. London, Ont.: School of Business Administration, The University of Western Ontario, 1969.

Miles, M. B. & Schmuck, R. A. Improving schools through organization and development: an overview. In Schmuck, R. A. & Miles, M. B. (Eds.), *Organization development in schools*. Palo Alto, Calif.: National Press, 1971.

Morris, C. G. II. *Effects of task characteristics on group process*. (Techn. Rep. No. 2. AFOSR Contract AF 49 (638) - 1291) University of Illinois, 1965.

Parlour, R. R. Executive team training. *Academy of Management Journal*, 1971, Sept., 341-344.

Reddy, B. W., & Kroeger, O. Intergroup model-building: the lego man. *The 1972 annual handbook for group facilitators*. Iowa City, Iowa: University Associates, 1972.

Rogers, C. *On becoming a person*. Boston: Houghton Mifflin, 1961.

Schein, E. H. *Process consultation: its role in organizational development*. Reading, Mass.: Addison-Wesley, 1969.

Schein, E. H. Organizational psychology: problems and prospects for the future. *Training and Development Journal*, 1973, 27, (3), 43-49.

Schmuck, R. A. and Runkel, P. J. & Langmeyer, D. Improving organizational problem-solving in a school faculty. *The Journal of Applied Behavioral Science*, 1969, 5, 455-482.

Seashore, S. E. *Group cohesiveness in the industrial work group*. Ann Arbor, Mich.: Survey Research Center, University of Michigan, 1954.

Shapiro, J. L. and Ross, R. R. Sensitivity training for staff in an institution for adolescent offenders. *The Journal of Applied Behavioral Science*, 1971, 7, 710-723.

Shaw, M. E. *Group dynamics: the psychology of small group behavior*. New York: McGraw-Hill, 1971.

Sorenson, J. R. Task demands, group interaction and group performance. *Sociometry*, 1971, 34, 483-495.

Steiner, I. D. *Group process and productivity*. New York: Academic Press, 1972.

Stinson, J. E. *The differential impact of participation in laboratory training in collaborative task effort on intact groups and fragmented groups*. Unpublished doctoral dissertation, The Ohio State University, Columbus, Ohio, 1970.

Stogdill, R. M. *Individual behavior and group achievement*. New York: Oxford University Press, 1959.

Stodgill, R. M. Group productivity, drive, and cohesiveness. *Organizational Behavior and Human Performance*, 1972, 8, 26-43.

Taylor, J., & Bowers, D. *The survey of organizations: a machine-scored standardized questionnaire instrument*. Ann Arbor: Institute for Social Research, 1972.

Tolela, M. *Effects of T-group training and cognitive learning on small group effectiveness*. Unpublished doctoral dissertation, University of Denver, 1967.

Wagner, A. B. The use of process analysis in business decision games *The Journal of Applied Behavioral Science*, 1965, 1, 387-408.

Zand, D. E., Miles, M. B. & Lytle, W. O., Organizational improvement through use of a temporary problem-solving system. Mimeograph 1964. As reported in Buchanan, P. C., Crucial issues in organization development. In H. A. Hornstein et al, (Eds.), *Strategies of social intervention*. New York: Free Press, 1971.

Zenger, J. H. *The effects of a team human relations training laboratory on the productivity and perceptions of a selling group*. Unpublished doctoral dissertation, University of Southern California, 1967.

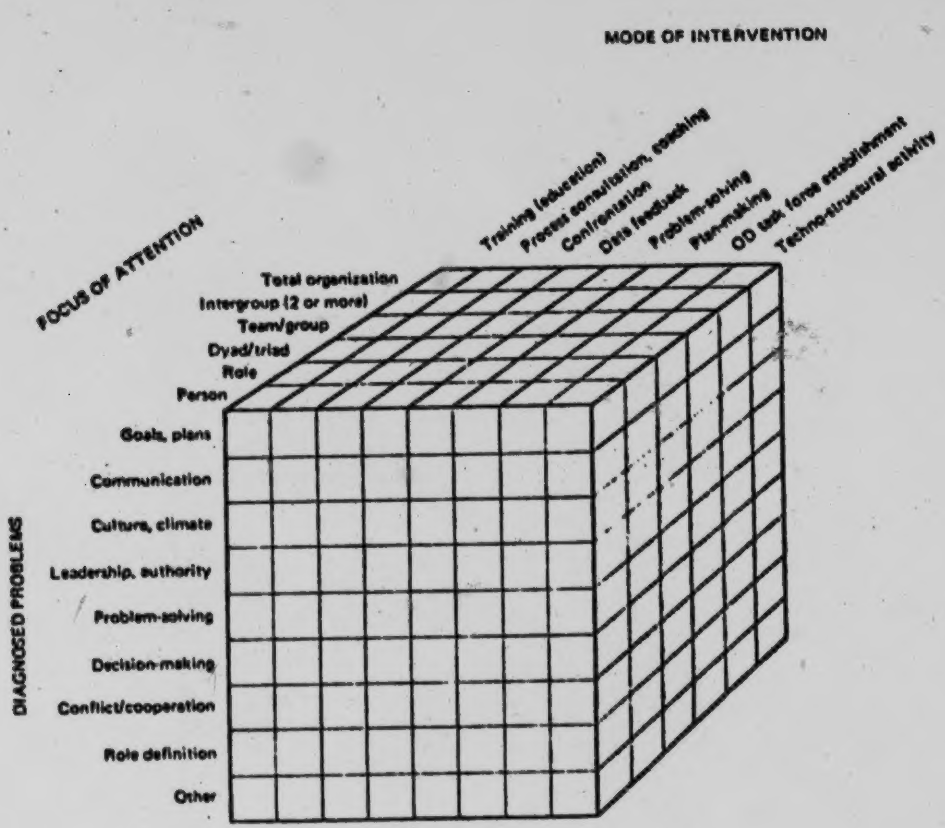
APPENDICES

APPENDIX A

APPENDIX A

O.D. INTERVENTIONS

Miles and Schmuck (1971) have developed an O.D. cube which can be used to classify O.D. interventions in terms of the mode of intervention used, the focus of attention, and the diagnosed problem which the intervention is designed to alleviate.


MODE OF INTERVENTION
Training (education)
Process consultation, coaching
Confrontation
Data feedback
Problem-solving
Plan-making
OD task force establishment
Techno-structural activity
FOCUS OF ATTENTION
Total organization
Intergroup (2 or more)
Team/group
Dyad/triad
Role
Person
DIAGNOSED PROBLEMS
Goals, plans
Communication
Culture, climate
Leadership, authority
Problem-solving
Decision-making
Conflict/cooperation
Role definition
Other

APPENDIX B

APPENDIX B

BLAKE AND MOUTON'S GRID O.D.[1]

Phase 1

Studying the managerial grid as a theoretical framework for understanding behavior dynamics of the corporations' culture.

Phase 2, Team Development

a. Each team member completes a series of grid instruments in which he gives his view of the quality and character of team action and individual efforts. Also included is his self perception and an identification of his own barriers to excellence.

b. The team meets one uninterrupted week to study and resolve team problems. Topics included are; current approaches to planning, patterns of communication, clarity of team and individual goals, the quality of the standards used in judging "good" and "poor," etc.--all matters are discussed in the context of actual work problems.

c. A grid profile on each member is prepared. (Team colleagues record what each individual's most characteristic grid style is, in the actual work situation.)

d. New team and individual performance goals and objectives are set after a study and rejection of unacceptable team cultural practices and individual performance. The team, in the light of these new performance goals, develops a demonstration project around a "real" work problem.

---

[1] [illegible]

e. The team reviews their external relationships and identifies other components of the company with whom their interworking is not producing results that should be attained.

Team development for Blake and Mouton is a top down strategy with the senior team going through the process first, followed in four to six weeks by the second level teams, and so on down the hierarchy. They do not regard it as a one shot affair.

The objectives which they hope are achieved by this type of team training are:

1. The provision of a model of team work excellence against which the team may judge their effectiveness.
2. Provision to each team member of a clear standard for setting objectives to increase his personal effectiveness.
3. A deepened sense of the importance of candor for getting their operational problems identified and resolved.
4. Greater readiness to face conflicts.
5. Awareness of the effects of past practices and a beginning realization of what must be done to get performance on a problem solving basis.
6. A deeper sense of personal commitment to contribute to organization success, above and beyond the service of narrow self-interests.

Phase 3, Inter-team Development

Phase 4

The top team engages ". . . in a study of the properties of an Ideal Strategic Corporate Model necessary to bring corporate profitability logic to a maximum trust condition (p. 16)."

Phase 5

Implementation of plans to develop the Ideal Strategic Corporate Model.

Phase 6

Evaluation and stabilization of achievement and setting new goals and objectives.

APPENDIX C

APPENDIX C

CONTRAST OF T-GROUPS AND TEAM DEVELOPMENT

T-Group	Team Development
Purpose: Examination of values, assumptions, behaviors, as they affect oneself and others.	Purpose: Examination of the decision-making process, control issues, communication, authority, work pattern.
Techniques/Events: Interaction among members.	Techniques/Events: Interaction among members.
Examination of behaviors, roles, which block or facilitate learning.	Examination of behaviors, roles, which block or facilitate learning and performance.
Establish styles of leadership appropriate to a given task.	Examination of effects of current leader styles.
Emphasis on the "here and now" situation (refers to the values, issues, feelings in specific immediate time frames.)	Emphasis on current internal group data (issues, decision-making process).
Examination of consequences of unmet emotional needs.	Dependent on project objectives: (process-task) of content/process or content alone.
Group norms established.	Existing norms examined.
Experiment to achieve openness and trust.	Plans devised to modify changes, experiment.
Unstructured.	Unstructured, but flexible.
No predetermined agenda.	Preplanned according to project objective.
Time: Short time--3 days to a week.	Time: 2/3 days to long term for reinforcement and review.
Who: Participants usually strangers.	Who: Includes boss/subordinates--usually formal groups.
Where: Off-site.	Where: Usually off-site.

APPENDIX D

PAGE

APPENDIX D 1 Notes on Team Building 118

APPENDIX D 2 Communication 1 121

APPENDIX D 3 A Basic Communication Skill for Improving Interpersonal Relationships 124

APPENDIX D 4 Communication 2 127

APPENDIX D 5 Distinguishing Between Descriptions and Inferences 130

APPENDIX D 6 An Exercise in Being Descriptive 131

APPENDIX D 7 Discussion of Responses to Exercise "Being Descriptive" 134

APPENDIX D 8 Paraphrase 137

APPENDIX D 9 Paraphrasing 140

APPENDIX D 10 Paraphrasing Practice 141

APPENDIX D 11 Handling Misunderstandings 143

APPENDIX D 12 Perception Checking 146

APPENDIX D 13 Active Listening Practice 148

APPENDIX D 14 An Exercise in Active Listening 150

APPENDIX D 15 Discussion of Responses to Exercise "Active Listening" 153

APPENDIX D 16 Time Investment for Increased Team Effectiveness 156

APPENDIX D 17 Description of Feelings 158

APPENDIX D 18 An Exercise in Communication of Feelings by Words 161

APPENDIX D 19 Discussion of Responses to Exercise in Communication of Feelings by Words 164

PAGE

APPENDIX D 20 Feelings 168

APPENDIX D 21 Awareness Categories 172

APPENDIX D 22 An Exercise in "Awareness Categories" 174

APPENDIX D 23 Discussion of Responses to Exercise in Awareness Categories 177

APPENDIX D 24 Blocking Behaviors 180

APPENDIX D 25 Examples of Blocking Roles 183

APPENDIX D 26 Clarification Procedure 185

APPENDIX D 27 Common Blocking Behaviors 187

APPENDIX D 28 Impact of Blocking Behavior 189

APPENDIX D 29 Constructive Openness 191

APPENDIX D 30 The Feedback Exchange 196

APPENDIX D 31 Exercise in Giving Feedback 198

APPENDIX D 32 Constructive Feedback Scoring Sheet 199

APPENDIX D 33 Acceptance, Unacceptance, and Change 200

APPENDIX D1

NOTES ON TEAM BUILDING

$$\begin{array}{ccccc} \text{Team} & & \text{good} & & \text{high} \\ & = & \text{problem} & \times & \text{member} \\ \text{Effectiveness} & & \text{solving} & & \text{commitment} \end{array}$$

In order for effectiveness to be high, *both* factors must be present.

Consider two examples to the contrary:

EXAMPLE 1: A team with one very active member or leader who pushes his own high quality ideas. Problem-solving is good *but* nobody carries out the ideas of the active member. Some aren't even aware of what exactly the idea is.

Example 2: A social team which gives little attention to the task. Member commitment is high but problem-solving is poor.

There are many forms of non-commitment, as examples:

- the person is present and makes contributions but only because he feels pressure to do so.
- the person is present but is withdrawn and bored.
- the person is present but is resentful or often "bucks" the group.
- the person is late to meetings.
- the person is absent.
- the person quits.
- the person doesn't carry through on decisions made by the group.

High member commitment means that the person is present because he wants to be (he is interested in and drawn to what is going on) and he carries out decisions because he understands what was decided and agrees with the decision or agrees that it was the best decision possible, given the circumstances.

Commitment is usually high when a member feels he has the opportunity to be heard.

Team building focuses on how to build good problem-solving and high member commitment in a task team.

This is necessary because the school system teaches only how to work as individuals in a competitive system. Few students have worked co-operatively in teams. Yet the management process in private business and government requires a large amount of teamwork. It has been estimated that more than 50% of the problems in organizations are people problems (managers don't have the skill to work together effectively).

So team building can be thought of as a series of skill building learning experiences. The skill areas typically cover:

1. communications.
2. problem-solving and decision-making
3. leadership.
4. process-observation and feedback.

Clarification of the term process-observation and feedback: observing process-observation refers to observing "How" the team is going about its task. It doesn't matter what the content or subject matter is. A team could be discussing financial or personnel problems. We are interested in how the team is doing this. For example, is there a chairman who recognizes hands raised, each person speaking in turn? Do few or most members speak? These are processes which can be observed as the team goes about its task.

Right now, for example, our subject is team building. The process we are using is reading from a written paper while one person speaks about what is on the paper and the others are sitting mainly in silence or asking questions of the speaker.

Team effectiveness can be improved by observing the communication, problem-solving, decision-making, and leadership processes and by improving them.

Think of process-observation and feedback as a monitoring system much like the thermostat on the wall. The thermostat reads the room temperature, decides whether the temperature is O.K., too low, or too high. If the temperature is O.K., the thermostat sends no instructions for change to the furnace. If the temperature is too low, the thermostat sends instructions to the furnace to turn the flow of heat into the room. If the temperature is too high, the furnace is turned down.

A team can monitor and regulate itself in a similar way and this is what we mean by process-observation and feedback. For example, suppose a team is solving a problem on financial decision-making. After a period of time during which the team has been communicating, problem-solving, making decisions, and experiencing leadership, the team can choose to monitor or observe each of these processes to determine how it is doing. If things are O.K., then there will be no need to make any changes, but if things are not O.K., the team may choose to change its processes to more effective ones.

Thus, a large part of the team building learning activities will focus on how to communicate, problem-solve, make decisions, and lead effectively.

But an equally important part of team building will focus on how to monitor and regulate these processes. This is called process-observation.

Process-observation will take place in two forms:

1. The Survey: team members fill out a questionnaire and receive feedback as to how these processes are doing. The team then takes corrective action if necessary.

2. Direct Observation: team members observe their team while in action and corrects the processes if necessary.

APPENDIX D2

COMMUNICATION 1

Goal

To give an orientation to the communication training.

Introduction

People are born into a society which has a *characteristic style* of communicating.

Children and students learn this characteristic style at home, in school, from friends, from the media.

This style becomes automatic, habituated. That is, we use the style without being aware that we are using it or that we are using the *characteristic* style of our culture or that there are *alternate* styles.

In this part of the course on communications we will do two things:

1. study the *characteristic* style of this culture.
2. learn and, if desired, use an *alternate* style.

The alternate style comes from the work over the last thirty years of what can be called the Humanist Psychologists.

There are two key goals of this *alternate* style:

1. to learn to understand other persons more accurately. To be able to experience the world as they do. This is called an Empathic way of relating.

2. to express one's own world more accurately. To make it possible for others to step into one's own shoes.

Because you learn an alternate style does *not* mean you should or must use it. Rather, as an experiment, you might choose to try to actively use it in this course. The course would then become like an isolated island for you. If the alternate style proves to be superior for you, you could also choose to try it elsewhere.

The *choice* is always to be yours, however. To use it here or to use it elsewhere will be up to you.

The alternate style will not always be appropriate elsewhere or with all persons. We will discuss the idea of appropriateness in depth during the course.

The following are some basic assumptions of the alternate style:

1. Almost all persons communicate. When they do, they are trying to express some essential part of themselves: an idea, a feeling, a need. All persons have a need to be respected in that they are heard and understood.

Persons try to express		Persons
needs ideas feelings	+	need to be heard and understood

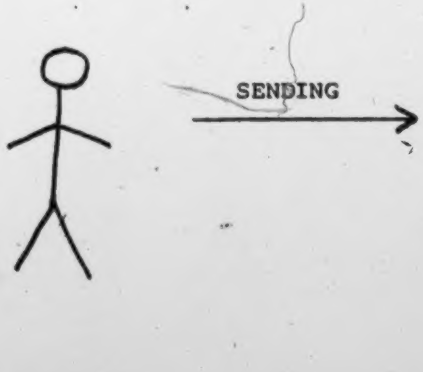
2. A person's communication style can be changed. The characteristic style we now use is habit. Habits can be changed. But not always easily. It has taken more than twenty years for most of you to learn your present style. It will take at least several years to change it to an alternate style should you choose to do so.

   Changing one's communication style is not the same as changing one's personality. Personality is what the person is. For example, personality determines what a person feels in certain situations. Communication style is how the person experiences his personality. For example, if in a certain situation a person is usually angry and expresses his anger by withdrawing into silence, a different communication style won't make the person less angry. Rather, it might provide that person with alternate ways of expressing the anger, for example, by saying "I'm angry."

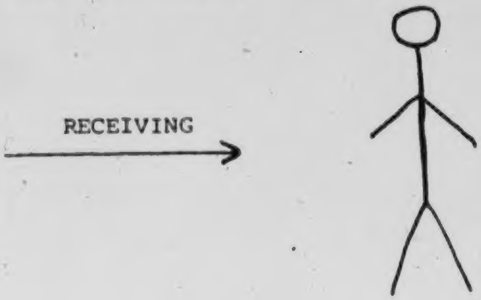
3. Hearing and understanding another person is not the same as giving in to or being controlled by that person. If a person says that he has a need to hit me, and I have heard and understood that need, I do not need to go along with being hit. The alternate style emphasizes a responsibility to hear and to understand but not to give in or yield to what is heard. Giving in or yielding are always a matter of personal choice.

The communications training will focus on two areas:

1. Sending more clearly



2. Receiving more clearly



APPENDIX D3

A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

The Problem

If you and another person are to improve the way you get along together, you must be able to convey what each does that affects the other. This is not easy. Most of us do not describe behavior clearly enough for others to know what actions we have in mind. Instead, we usually state what we infer about his motivations, attitudes and personality traits; often we are not even aware we are inferring rather than describing. Because we are so used to inferring we may not even know what the other did that led us to our inferences.

The skill of behavior description, then, depends upon accurate observation which, in turn, depends upon being aware of when you are describing and of when you are inferring.

The Skill

A statement must pass two tests to be a behavior description.

1. A behavior description reports specific, observable actions rather than inferences or generalization about the person's motives, feelings, attitudes or personality traits. It states what was observed. It does not infer about why.

Behavior Descriptions	*Inferences*
Fran walked out of the meeting 30 minutes before it was finished.	Fran was annoyed. Fran had an appointment elsewhere.
Bob's eyes filled with tears.	Bob had a cold. Bob felt sorry for himself.
Becky did not say anything when Bill asked her a question.	Becky did not hear Bill. Becky resented Bill's question. Becky was embarrassed.

2. A behavior description is non-evaluative: it does not say or imply what happened was good or bad, right or wrong. Evaluative statements (such as name-calling, accusations, judgements) usually express what the speaker is feeling and convey little about what behavior is observed:

Behavior Descriptions	*Inferences*
Jim talked more than others on this topic. Several times he cut others off before they finished.	Jim is rude. Jim wants to hog the center of attention.
"Bob, you've taken the opposite of most statements Harry has made today."	"Bob, you're just trying to show Harry up." "Bob, you're being stubborn."
Fran walked out of the meeting 30 minutes before it was finished.	Fran is irresponsible. Fran doesn't care about others.
"Sam, you cut in before I finished."	"Sam, you deliberately didn't let me finish."

The word "deliberately" implies that Sam knowingly and intentionally cut you off. All anybody can observe is that he did cut in before you had finished.

As an example of the difference a behavior description may make, let's suppose you tell me I am rude (a generalized trait) or that I don't care about your feelings (an inference about my motivation). Because I am not *trying* to be rude and because I feel I *do* care about your feelings, I don't know what the basis is for your negative evaluation of me. We certainly have not moved closer to a shared understanding. However, if you point out that several times in the past few minutes I have interrupted you and have overridden you before you could finish what you were saying, I get a clearer picture of what actions of mine were affecting you.

Several members of his group have told Ben that he was too arrogant. Ben was confused and puzzled by this judgement. He was confused because he didn't know what to do about it; he didn't know what it referred to. He was puzzled because he didn't feel arrogant or scornful of the others. In fact, he admitted he really felt nervous and unsure of himself. Finally, Joe said that Ben often laughed explosively after Ben made a comment that seemed to have no humorous aspects. Others immediately agreed this was the behavior that led them to perceive Ben as looking down on them and, therefore, arrogant. Ben said he had not been aware of this.

The pattern, thus, was as follows. When he made a statement of which he was somewhat unsure, Ben felt insecure. . . . Ben's feelings of insecurity expressed themselves in an explosive laugh after he made the statement. . . . the other person perceived Ben as laughing at him.

. . . the other person felt put down and humiliated. . . . the other's feelings of humiliation was expressed in the accusation that Ben was arrogant. Note that Ben had no awareness of his own behavior (the laugh) which was being misread until Joe accurately described what Ben was doing. Ben could then see that this laugh was a way of attempting to cope with his own feelings of insecurity.

To develop skill in describing behavior you must sharpen your observation of what actually did occur. You must force yourself to pay attention to what is observable and to hold inferences in abeyance. As you practice this you may find that many of your conclusions about others are based less on observable evidence than on your own feelings of affection, insecurity, irritation, jealousy, or fear. For example, accusations that attribute undesirable motives to another are usually expressions of the speaker's negative feelings toward the other.

John L. Wallen
Northwest Regional Educational Laboratory
Portland, Oregon
Revised: 1/1970

APPENDIX D4

COMMUNICATION 2

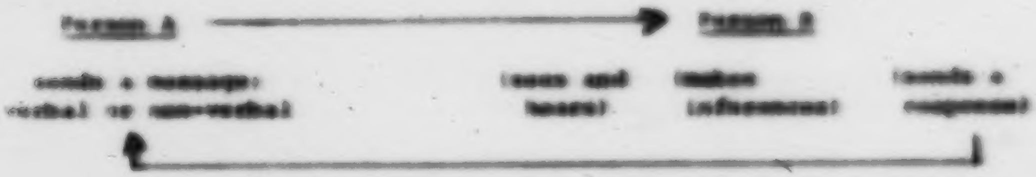
Goals

1. Learn to distinguish between descriptions and inference/evaluations.
2. Demonstrate the characteristic tendency to make inferences.
3. Clarify the Inference Process.
4. Develop some insight into one's own inference process.
5. Demonstrate that inferences can be right or wrong.

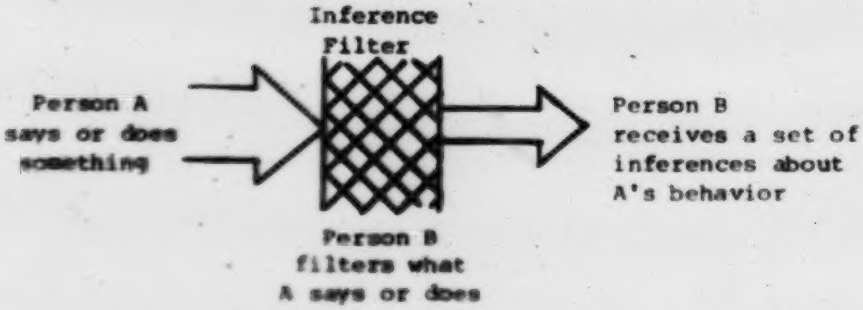
Discussion

When asked to "describe what you saw and heard going on in the role play," many persons actually wrote inferences and/or evaluations. The ratio between descriptions and inferences/evaluations is usually about 1:1. This indicates that the characteristic style is to make inferences when descriptions are asked for. Put another way, this data indicates that persons characteristically see and hear in terms of inferences, not in terms of what is actually happening.

The inference process is subtle and very fast. In the diagram below, person A sends a message. Person B sees and/or hears the message, instantly makes inferences about the message, and sends an immediate response.



It is as if person B is wearing "inference" filters, for often what is seen or heard (the accurate description of the message) does not come to B's consciousness. Rather, in place of the description comes an inference.


Inference Filter
Person A says or does something
Person B receives a set of inferences about A's behavior
Person B filters what A says or does

The alternate style emphasizes that it is important that a person be aware that he is making an inference.

In order to be aware, the person must understand the distinctions between descriptions, inferences, and evaluations.

The alternate style also emphasizes that inferences do not always accurately interpret the other person's behavior. The person should be willing to be tentative about his inferences, to regard them only as possibilities. Some inferences are accurate, but some are not.

Inferences often reveal more about the person making the inference than about the person about whom the inference is made. As an example, if I meet a man older than myself I may infer that he is somewhat cold and distant because my father was cold and distant, or because I went to a school with male teachers and they were cold and distant. Therefore, whenever I see an older man, I immediately transfer his image to cold and distant. Note that one cannot really see or hear coldness. It may also be true, however, that the person I see and hear is, in fact, cold and distant.

An example in the role play demonstrates a second characteristic style. The father indicated that he made inferences about his son's intentions. Yet the father did not make his inferences explicit or check them when talking with his son. The father made inferences and acted on them as if the inferences were accurate.

The alternate style emphasizes that a person has several choices besides the characteristic style of either not being aware that he is making inferences or acting as if his inferences are accurate.

1. The person can check out his inference directly. There are two styles for checking out inferences, paraphrasing, and perception checking.

2. The person can check out his inference indirectly. For example, he can gather additional information about the person without the person knowing that he is doing so.

3. The person can reject his own inference (it is usually impossible to stop making inferences) and stick to the description of the behavior of the person in question.

When he finds himself making inferences a person can help himself become more descriptive by asking the question: "What was the person saying or doing that made me think of the inference?"

How do inferences cause problems in human communications? First, many persons become defensive when a wrong inference is made about them and the communication focus becomes a kind of proving ground, each person trying to prove either that the inference is correct or that it is incorrect. Thus, the persons don't progress in their conversation. Second, many persons become uncomfortable or carry a sense of invasion of privacy when others make inferences about their motives and thoughts. This is true even when the inferences are accurate.

Third, inferences often can lead to a "self-fulfilling prophecy." That is when I infer something about another person I behave as if my inference is true. For example, I may treat my child as if he is irresponsible because he is a child and I associate irresponsibility with children. The child learns through my behaviors that I think of him as irresponsible and comes to think of himself as irresponsible. After all, my opinion as parent is very powerful. In the end, believing himself to be irresponsible, the child is unlikely to take on activities which call for responsible behavior. When he does this, I have proof that he is irresponsible. Thus we have fulfilled the initial prophecy or inference.

APPENDIX D5

DISTINGUISHING BETWEEN DESCRIPTIONS AND INFERENCES

Objective

The objective of this exercise is for you to be able to distinguish between BEHAVIOR DESCRIPTIONS and INFERENCES. (It is not essential to the training that you be able to clearly distinguish between inferences and evaluative inferences. For now, treat evaluative inferences and inferences as inferences.)

To accomplish this objective, you are to categorize the written statements describing the role play and the two persons. For each written statement, discuss as a group whether the statement is (1) a Behavior Description, or (2) an Inference or Evaluative Inference.

As you categorize each written statement, place a mark in the appropriate summary table below.

When your group has finished the exercise, total your findings for the group as a whole and place your group findings on the tables on the board. In this way, I will have an indication as to how many groups have completed the exercise.

Because you might not have time to finish categorizing everyone's statements, rotate around the group so that each person has at least several of his statements categorized.

ROLE PLAY		*TWO PERSONS*	
Behavior Description	Inference or Evaluative Inference	Behavior Description	Inference or Evaluative Inference
TOTAL =	TOTAL =	TOTAL =	TOTAL =

APPENDIX D6

AN EXERCISE IN BEING DESCRIPTIVE

Procedure

This exercise is designed to help you learn as you go through it. It is not a test. For this reason do not mark all items at once. This is a programmed learning exercise. You do not move on to a new item until you have discussed your answer to the first item with others in your team or group. Follow the steps outlined below.

1. Read the introduction.
2. Mark your responses to item one only.
3. Refer to the sheet entitled "discussion of responses" and compare your answer and reasons with the answer and reasons for item one. Discuss this with your team or group.
4. When you have fully discussed item one and are certain you have full understanding of the reasons, then move on to item two and repeat the process. Continue this process of working with one item at a time until you complete the test.

Introduction

When required to be descriptive about what someone else is doing, we often state what we infer about (guess about) that person's motivations, intentions, feelings, attitudes, ideas, and personality traits. Often these guesses are stated as if the person making the inference believed his guess to be true. Because we are so used to making inferences, we often do not recall what the other person did that led us to our inferences.

To be descriptive, we must first make accurate observation and secondly, describe what has truly been observed. We are not able to observe motivations, intentions, attitudes, feelings, and personality traits as these are private to the individual. We do, however, observe his or her behavior and make guesses about these. Therefore, to be descriptive we must describe observable behavior.

A Behavior Description

- reports specific observable actions
- is non-evaluative

An Inference

- is a guess about motives, attitudes, feelings, intentions or personality traits

An Evaluation

- is a value judgement connoting good or bad about the actions of another person

Look at the set of items below. In each set there will be several statements. These statements will be either (1) DESCRIPTIVE, or (2) INFERENCE/EVALUATION statements.

Put a D before each statement which is descriptive of specific observable action.

Put an I/E before each statement which is inferential and/or evaluative.

Item 1 (_____) a. **Joe was rude.**

(_____) b. **Joe said nothing when Harry said "Cut it out."**

(_____) c. **Joe was acting like a child when he withdrew into a silent pout.**

Item 2 (_____) a. **Harry knew that Joe was feeling discouraged.**

(_____) b. **Harry said, "Joe, I know you. You're just discouraged."**

(_____) c. **When Harry looked at Joe, he had tears in his eyes.**

Item 3 (_____) a. **Archie talked about the weather and the baseball game.**

(_____) b. **Archie was lazy today in our group session.**

(_____) c. **Archie deliberately spoke about baseball to change the subject.**

Item 4 (_____) a. **After Allan's outburst everybody was afraid to say anything.**

(_____) b. **Everybody stopped thinking about the task when Allan exploded in our group meeting today.**

(_____) c. **After Allan said that he was going to quit our group because he was being ignored most of the time, there was silence for about 10 minutes.**

Item 5 (_____) a. Bill withdrew into a silent pout.

(_____) b. Bill forgot the meeting.

(_____) c. After he missed two meetings, it became clear to everyone that Bill was going to quit.

Item 6 (_____) a. Mary became silent for the second time during the meeting.

(_____) b. Sue's voice was louder than Mary's.

(_____) c. Mary sat quietly after Sue spoke loudly to her.

APPENDIX D7

DISCUSSION OF RESPONSES TO EXERCISE "BEING DESCRIPTIVE"

The item numbers have been scrambled so that you will not accidentally look at the responses for the following item.

Item 1 a ... I/E. A value judgement of Joe's behavior -- rude connotes bad and does not describe what Joe was doing that is considered to be rude.

b ... D. A description of Joe's behavior at a certain specific moment in time.

c ... I/E. A value judgement of Joe's behavior as childlike plus an inferential evaluation of his behavior as pouting. This does not describe specific observable behavior. Joe is likely to respond to these statements in a defensive way if he does not have the same value judgements about his behavior.

Item 5 a ... I/E. A guess about Bill's feelings and a value judgement about the nature of his behavior. "Pouting" typically connotes something bad or negative -- disliked behavior. This statement does not describe what Bill actually did, e.g., got up, left the group circle and sat in the corner with his bottom lip sticking out and his head down.

b ... I/E. An inference or guess of explanation for a certain behavior which has not been described, e.g., Bill did not attend today's meeting.

c ... I/E. Although this statement includes the description element about Bill having missed two meetings, this statement is primarily inferential -- that is, it is a guess about the meaning of Bill's absence and a guess that everyone was thinking that Bill was going to quit. There is no description of the behavior of the other members of the group that has led the person making this statement to guess that others think the same as he does.

Item [illegible] a ... D. A descriptive statement about the behavior of [illegible] -- it describes what he has talked about. This behavior could have been observed by others.

b ... I/E. An evaluative guess about Archie's motivation and intentions. Lazy, typically has a negative connotation thereby making this statement an evaluative inference. There is no description of the behavior that was observed prior to the judgement of Archie as lazy.

c ... I/E. An inference about Archie's intentions. Key words that indicate this is an inference are "deliberately" and "to change the subject." Both are guesses about Archie and not observable. The observable event was Archie talking about baseball.

Item 6 a ... D. A specific reference to a behavioral fact. Any other group member could have observed that Mary became silent for the second time during the meeting.

b ... D. Although this statement contains an evaluative component, it could be classified as a comparative behavior description in that this could have been observed by others. Problems would be encountered if the difference between the behavior of the two persons had not been significant or if the behaviors had been perceived by others to be of the same quality. As long as this is a behavior description that could be verified by others, there need be no argumentation about what actually happened.

c ... D. A specific description that occurred at a specific moment in time. As this description is very specific, listeners would know what event the speaker was particularly referring to. More general descriptions may need to be made this specific so that everyone understands what the focal event is.

Item 4 a ... I/E. Although there is a specific reference to a behavioral event (Allan's outburst) this statement is primarily a guess about what was privately experienced by other group members. The person making this statement has not described those behaviors of the other group members that he observed which led him to guess that others were afraid. It may be that he himself was afraid to say anything and he guessed that others felt like him when they did not say anything.

b ... I/E. A guess about what other people were thinking or not thinking about after a behavioral event involving Allan. This could only be verified by asking others what they were thinking about.

c ... D. A specific reference to a particular moment in time and a description of the behavior that took place (silence for about 10 minutes).

Item [illegible] a ... I/E. A guess about Harry's thoughts and a guess about Joe's feelings. Only Harry can verify whether or not he was thinking that Joe was discouraged. Only Joe can verify whether or not he was feeling discouraged. No description of Harry's behavior -- no description of Joe's behavior.

b ... D. A direct quote of what Harry said. This is a specific description that others could verify by their own observations. This same description could have been recorded on an audio-tape or a video-tape. There is no judgement about the behavior and no guesses about its meaning.

c ... D. A description of Harry's behavior in clear terms. Others also would have observed this behavior. As the description is quite explicit, the behavior could be duplicated, such as an actor might do in a play.

APPENDIX D8

A BASIC COMMUNICATION SKILL FOR IMPROVING INTERPERSONAL RELATIONSHIPS

The Problem

Tell somebody your phone number and he will usually repeat it to make sure he heard it correctly. However, if you make a complicated statement, most people will express agreement or disagreement without trying to insure that they are responding to what you intended. Most people seem to assume that what they understand from a statement is what the other intended.

How do you check to make sure that you understand another person's idea, information, or suggestions as he intended them? How do you know that his remark means the same to you as it does to him?

Of course, you can get the other person to clarify his remark by asking, "What do you mean?" or "Tell me more." or by saying "I don't understand." However, after he has elaborated you still face the same question. "Am I understanding his idea as he intended it to be understood?" Your feeling of certainty is no evidence that you do, in fact, understand. (See "On Misunderstanding.")

The Skill

If you state in your own way what his remark conveys to you, the other can begin to determine whether his message is coming through as he intended. Then, if he thinks you misunderstand, he can speak directly to the specific misunderstanding you have revealed. I will use the term "paraphrase" for any means of showing the other person what his idea or suggestion means to you.

Paraphrasing, then, is any way of revealing your understanding of the other person's comment in order to test your understanding.

An additional benefit of paraphrasing is that it lets the other know that you are interested in him. It is evidence that you do want to understand what he means.

If you can satisfy the other that you really do understand his point, he will probably be more willing to attempt to understand your views.

Paraphrasing, thus, is crucial in attempting to bridge the interpersonal gap. (1) It increases the accuracy of communication, and thus the degree of mutual or shared understanding. (2) The act of paraphrasing itself conveys feeling--your interest in the other, your concern to see how he views things.

Learning to Paraphrase

People sometimes think of paraphrasing as merely putting the other person's ideas in another way. They try to say the same thing with different words. Such word-swapping may merely result in the illusion of mutual understanding as in the following example.

Sarah: Jim should never have become a teacher.
Fred: You mean teaching isn't the right job for him?
Sarah: Exactly! Teaching is not the right job for him.

Instead of trying to reword Sarah's statement, Fred might have asked himself, "What does Sarah's statement mean to me?" In that case the interchange might have sounded like this.

Sarah: Jim should never have become a teacher.
Fred: You mean he is too harsh on the children? Maybe even cruel?
Sarah: Oh no. I meant that he has such expensive tastes that he can't ever earn enough as a teacher.
Fred: Oh, I see. You think he should have gone into a field that would have insured him a higher standard of living.
Sarah: Exactly! Teaching is not the right job for Jim.

Effective paraphrasing is not a trick or a verbal gimmick. It comes from an attitude, a desire to know what the other means. And to satisfy this desire you reveal the meaning his comment had for you so that the other can check whether it matches the meaning he intended to convey.

If the other's statement was general, it may convey something specific to you.

Larry: I think this is a very poor textbook.
Fred: Poor? You mean it has too many inaccuracies?
Larry: No, the text is accurate, but the book comes apart too easily.

Possibly the other's comment suggests an example to you.

Lenore: This book has too many omissions; we shouldn't adopt it.
Fred: Do you mean, for example, that it contains nothing about the Negro's role in the development of America?
Lenore: Yes, that's one example. It also lacks any discussion of the development of the arts in America.

If the speaker's comment was very specific, it may convey a more general idea to you.

Ralph: Do you have 25 pencils I can borrow for my class?
You: Do you just want something for them to write with? I have about 15 ball-point pens and 10 or 11 pencils.
Ralph: Great. Anything that will write will do.

Sometimes the other's idea will suggest its inverse or opposite to you.

Stanley: I think the Teachers' Union acts irresponsibly because the Administration has ignored them so long.
You: Do you mean that the T.U. would be less militant now if the Administration had consulted with them in the past?
Stanley: Certainly. I think the T.U. is being forced to take more and more desperate measures.

To develop your skill in understanding others, try different ways of (1) conveying your interest in understanding what they mean, (2) revealing what the other's statements mean to you. Find out what kinds of responses are helpful ways of paraphrasing for you.

The next time someone is angry with you or is criticizing you, try to paraphrase until you can demonstrate that you understand what he is trying to convey as he intends it. What effect does this have on your feelings and on his?

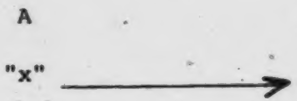
John L. Wallen
Northwest Regional Educational Laboratory
Portland, Oregon
1968

APPENDIX D9

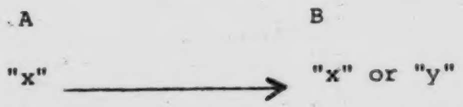
PARAPHRASING

Paraphrasing is useful in clarifying communications. The process is as follows:

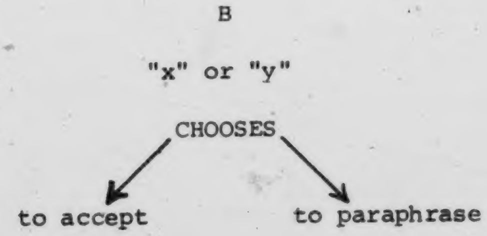
Two persons, A and B, are communicating. A sends a message "x" to B.



B receives a message. It may be "x," the exact message A has sent, or it may be "y," some of what A has sent, but with B's inferences added.



B makes a choice at this point. He can choose to accept what he has received or he can choose to attempt to clarify what he has received by paraphrasing.



If B chooses to accept what he has received and he received "x," he's got the right message, but if he received "y," he's got the wrong one.

If B chooses to paraphrase, then even if he started with the wrong message, he's likely to end up with the right one, "x."

APPENDIX D10

PARAPHRASING PRACTICE

1. Write two short, simple sentences about your feelings in the communications workshop thus far.

2. Break into trios or quartets. Label selves A, B, and C (and D if quartet).

3. First role play using a word swap and a paraphrase.

   A reads A's first sentence to B and C.
   B writes out a word swap.
   C writes out a paraphrase.
   (D writes out a paraphrase.)

   A says first sentence to B as if B has never heard it.
   B replies with the word swap he has written.
   A and B spontaneously "finish" role play of word swap, e.g., A may choose to say, "Yes, that's what I said," or to elaborate.

   A says same first sentence to C as if C has never heard it.
   C replies with the paraphrase he has written.
   A and C spontaneously "finish" role play of paraphrase, e.g., A may choose to say, "Yes, that's what I meant," or "No, that's not quite it" and elaborate further.

   A, B, and C discuss distinctions between word swap and paraphrase and differences in impact. If desired, they compose alternate paraphrases for the same first sentence.

4. Second role play.

   B reads his first sentence to C and A.
   C writes out a word swap.
   A writes out a paraphrase.

   Repeat the above procedures.

5. Third role play.

   Repeat the above procedure or, when members of the trio feel ready, they should drop the written preparations and begin to spontaneously role play paraphrasing with their remaining sentences or others they choose to make up on the spot.

4. The task continues discussing the worksheet or any other matter with the following discussion rule: In order to speak, the person wishing to speak must first paraphrase the contents of what was said by the person speaking just before.

IF THERE IS ANY NEED FOR CLARIFICATION, CALL THE INSTRUCTOR INTO YOUR GROUP.

Materials not to be reprinted without permission of
Dr. R. V. Rasmussen
Faculty of Business Administration
University of Alberta

APPENDIX III

HANDLING MISUNDERSTANDINGS[1]

Dealing with Breakdowns in Communication

Real communication is very hard to achieve. We tend to judge, to evaluate, to approve or disapprove before we really understand what the other person is saying--before we understand the frame of reference from which he is talking. This tendency of most humans to react first by forming an evaluation of what has just been said, to evaluate it from our own point of view, is a major barrier to mutual interpersonal communication.

Progress toward understanding can be made when this evaluative tendency is avoided--when we listen with understanding--when we are actively listening to what is being said. What does this mean? It means to see the expressed idea and attitudes from the other person's point of view, to sense how it feels to him, to achieve his frame of reference in regard to the thing he is talking about.

This sounds simple, but it is not.

To test the quality of your understanding, try the following. If you see two people talking past each other, if you find yourself in an argument with your friend, with your wife or within a small group, stop the discussion for a moment, and for an experiment, institute this rule of Carl Rogers. "Each person can speak up for himself only after he has first restated the ideas and feelings of the previous speaker accurately--and to that speaker's satisfaction."

This would mean that before presenting your own point of view it would be necessary for you to really achieve the other speaker's frame of reference--to understand his thoughts and feelings so well that you could summarize them for him. This is a very effective process for improving communications and relationships with others. It is much more difficult to do behaviorally than you would suspect.

---

[1] The approach proposed here for dealing with misunderstandings was first stated by Carl Rogers in 1951. This abstract, elaboration, and extension of his ideas to handling conflict was prepared by Floyd Mann, Center for Research on Utilization of Scientific Knowledge, University of Michigan. For more information, see Carl Rogers, On Becoming a Person (Boston: Houghton Mifflin, 1961), Chapter 17.

What will happen if you try to do this [illegible]?

You will find that your own next comments will have to be drastically revised. You will find the emotion going out of the discussion, the differences being reduced. There is a decrease in defensiveness, in exaggerated statements, in evaluative and critical comments. Attitudes become more positive and problem solving. The differences which remain are of a rational and understandable sort. Or there are real differences in basic values.

What are the stakes? The obstacles? What are the difficulties that keep this bit of knowledge from being utilized?

Try this and you risk being influenced by the other person. You might see it his way--have to change your position. There is the risk of change. In this sense, listening can be dangerous--and courage is required.

There is a second obstacle. It is just when emotions are strongest that it is most difficult to achieve the frame of reference of the other person or group. A third party who is able to lay aside his own feelings and evaluations can assist greatly by listening with understanding to each person or group and clarifying the views and attitudes each holds. A third party catalyst may, incidentally, have great difficulty in intervening and proposing the use of this approach. Any intervention into a heated discussion can be interpreted by one party or the other as someone taking the other person's side. This is especially true if the third party asks you to try and state the other person's ideas and feelings when you have not really been listening, but thinking what you should say next when he pauses to take a breath.

Another difficulty stems from our notions as to what is proper to ask a person to do in a discussion. It seems quite within good taste to ask a person to restate how he sees the situation. But to ask him to restate the other man's position is not consistent with our common sense ways of handling differences. The one who would change the pattern--try to break out of the vicious circle of increasingly greater misunderstanding--must have enough confidence in himself to be able to propose something different. He will have to have an appreciation of how to go from dealing with misunderstandings to handling conflict and using differences--of how differences can be used to find more elegant solutions to problems. Equally useful will be an awareness that thesis-antithesis-synthesis is a potential outcome from a development discussion of differences. Discussions in which one person loses and the other wins seldom solve anything permanently. When a person senses a win-lose situation developing, it should be interpreted as a clue to the need for a new approach, a search for alternate solutions, to be sure that there is not another answer to the problem.

The greatest difficulty of all, of course, is to learn to use the rule when you, yourself, are in an increasingly heated verbal exchange. Not to be dependent on a third person to intervene when you create or are a party to a growing misunderstanding is real evidence of understanding the apparent [illegible] [illegible]. The real value of this code is available to us only when each of us can note that we are getting increasingly irritated, angry, and unable to communicate effectively-- when we can use these signals to identify the situation in which we are personally involved and then suggest where the rule might be employed-- if we could retrieve the rule from our memory, and if we could use it behaviorally in an effective manner.

APPENDIX (B)

PERCEPTION CHECKING

Like paraphrasing, perception checking is also a means of clarifying communications from another person. However, the focus of perception checking is on the other person's feelings or inner emotional state rather than on his ideas or thoughts. A further distinction between paraphrasing and perception checking can be made, in that while paraphrasing is most always a direct and immediate response to a verbal message, perception checking is a response either to a verbal or a non-verbal message.

Another characteristic of a perception check is that it often includes a description of the verbal or nonverbal behavior which has caught the attention of the perception-checker.

Like paraphrasing, perception checking is a test to see whether you have interpreted the feelings of the other accurately (whether you have correctly inferred the other's feelings). Thus, the perception check is tentative.

Examples of perception checks:

"You are looking out the window. I get the impression that you are angry with me. Is that true?"

"Nobody commented on your suggestion. Am I right that you feel disappointed?"

"I'm not sure whether your expression means that my comment hurt your feelings, irritated you, or confused you. Would you be willing to say?"

Often people do check on another person's feelings in a manner which could be labelled mind reading. Notice that in the following example of mind reading, the person acts as if his inference about the other's feelings is true:

"You are looking out of the window. Why are you so angry?"

Both a perception check and a paraphrase can be constructed from the same message from the other person. The choice of focus is up to the receiver depending on the situation (to be discussed under appropriateness). Following is an example:

[illegible]: "I [illegible] should never have become a teacher!" (shaking her head.)

[illegible] paraphrasing: "Do you mean that no [illegible] [illegible] [illegible] [illegible] well?"

[illegible] perception checking: "You are shaking your head. Are you feeling badly about this?"

In sum, both paraphrasing and perception checking are tentative question strategies used to check inferences made about other persons' communications. Perception checks focus on feelings, paraphrasing on ideas or thoughts. Perception checks are taken from verbal messages, as well as nonverbal messages; paraphrases only from verbal ones. Perception checks often include a description of the nonverbal message from which the inference is drawn; paraphrases do not repeat the verbal message.

APPENDIX III

ACTIVE LISTENING PRACTICE

This session will have two parts--individual work and pair work.

Individual Work

1. Read this handout so that you understand the procedures we will follow.

   In pairs, you are going to use active listening skills to talk through a real problem with your partner. Use the next five or ten minutes to call to mind a problem which you have in your interpersonal relationships. Try to find a problem situation which has occurred in the last few weeks and for which you still have some unsettled feelings. Be sure to select a real problem for you; don't talk about someone else's problems or talk about problems in general.

Pair Work

2. Begin by making agreements as to how you will work together:

   -- I suggest that you agree that anything you discuss is confidential unless you both agree otherwise. Talk about this one.
   -- Agree on a place in which to work. I suggest a quiet spot, if you can find one.
   -- Discuss whether you will criticize each other's active listening skills. I suggest that you should give each other feedback. Discuss this one.

3. Decide who is to start.

   The person who starts will begin to describe his problem situation. Since this is still early in the learning of active listening skills, I suggest that the person who starts should proceed in the following manner:

   -- Don't speak too fast.
   -- Pause after sentences; look for indications that your partner might want to respond with his active listening skills; if so, stop and wait.
   -- Be aware of the styles that your partner is using and of

your own reactions to them. Is he using active listening skills or blocking behaviors? Probably there will be some of both. How do you feel about each?

The person who plays the part of the active listener should try to stick to paraphrasing, perception checking, and other clarifying acts. Avoid using blocking styles like [illegible] questions, [illegible] solutions, [illegible], agreeing with the person [illegible] or reassuring.

When the first problem is talked through, discuss the active listening skills and blocking behaviors used by the listener. Try to figure out examples of each. Also discuss the impact of this session which we will assume contained more active listening and less blocking behavior than most conversations. You can use the following scales to discuss impact:

- Did you get further than you normally do in the discussion of a problem?
- Did you get some new insights?
- Did you have a hard time (listener) keeping from suggesting solutions to the other person's problems?
- Did you feel helped or interfered with?
- Did you feel heard, understood, and accepted?
- Did you talk about the feeling element in your problems more than you usually do? Or did you remain with just the facts?
- Did your relationship with the other person grow warmer, more intimate, more friendly?
- Would you want to talk with this person some more?
- What were some of your other reactions (both sender and listener)?

Reverse the process. The person who presented the first problem is now the active listener and the active listener presents.

When you are finished giving feedback and discussing impact for both problems, spend some time generalizing. For example, given what you have just done, if you wanted to build a cooperative relationship or help another person, which communication styles would you predict would generally accomplish this? Which styles are found most in the society in which you live and communicate, active listening or blocking? Why? Will the active listening skills be inappropriate in some situations? Which ones?

APPENDIX [illegible]

AN EXERCISE IN ACTIVE LISTENING

Procedure

This exercise is designed to help you learn as much as possible. It is not a test. For this reason, do not mark all items at once. This is a developmental learning exercise. You do not move on to a new item until you have discussed your answer to the first item with others in your team or group. Follow the steps outlined below:

1. Read the introduction.
2. Mark your responses to item one only.
3. Discuss your response with your team or group explaining the reasons group members used for marking their responses as they did.
4. Refer to the sheet entitled "Discussion of responses" and compare your answer and response with the answer and response for item one. Discuss any discrepancies within your group until you are sure everyone understands the response in the "Discussion of responses" sheet.
5. When you have fully discussed item one and are certain you have full understanding of the response presented, then move on to item two and repeat the process. Continue this process of working with one item at a time until you complete the exercise.

Introduction

A wide variety of inferences or guesses about meaning can be made for even relatively simple statements. Often these inferences are incorrect or only partially correct and do not, in fact, match the intended meaning of the sender. Problems arise when these misinterpretations are acted upon and not checked out. In characteristic communication styles, people often do not take the time to check their inferences out, generally believing that they have understood what the sender has meant. All too often we subsequently discover that there has, in fact, been a misunderstanding.

To prevent this misunderstanding, we might choose to be active listeners. Active listening is the process of checking out our guesses about the meaning of the words and behavior of the other person in communication with us. This involves:

1. Treating our guesses as tentative.

2. Stating our guesses.

3. Asking if these inferences are true or match the meaning intended.

If we are checking out our guesses about the meaning of what the other person has said in order to better understand his or her ideas, we are using the skill called paraphrase. If we are checking out our guesses about the meaning of the other person's words and behavior in order to better understand his or her feelings, we are using the skill called perception checking.

In both paraphrasing and perception checking, we actively share our inferences to let the sender know what we have understood of their communication.

This is contrasted with word mapping and parroting in which the listener does not reveal his inferences. A word map is merely a simple change of words and does not reveal the interpretation being made by the listener. A parroting response is merely the act of repeating the words of the original speaker. Both word mapping and parroting may result in the illusion of shared understanding and, for this reason, are to be avoided if one wish to be certain of having understood the other.

Look at the set of items below. In each set there will be several statements below the statement of the original speaker which is shown in quotation marks. These statements will be either (1) paraphrases, (2) perception checks, (3) word maps, (4) parroting statements, or (5) none of the above.

Put a P before each statement which is a paraphrase.

Put a PC before each statement which is a perception check.

Put a WM before each statement which is a word map.

Put a PR before each statement which is a parroting response.

Put an N before any statement which is none of the above.

Item 1. "I think this class is going very well."

(____) a. It's going great, eh?

(____) b. Do you mean that you like working in groups?

Item 2. "I really don't like this [illegible] program."

______ a. You seem to be feeling discouraged. Is that right?

______ b. Do you mean that you don't like [illegible] to [illegible] so many repeated [illegible]?

______ c. So, you don't like [illegible].

Item 3. "I think we have a really great [illegible]."

______ a. You're not getting [illegible].

______ b. So, you think we have a really great [illegible].

______ c. I imagine that you are surprised by that. Is that right?

______ d. Do you mean that you like the [illegible] or that you work together well?

Item 4. "I don't know about this [illegible]."

______ a. I don't either. It confuses me, [illegible].

______ b. Don't worry. It doesn't go on the [illegible].

______ c. Do you mean you are afraid of failing?

______ d. Do you mean you have no idea what [illegible] is going to be [illegible] with this [illegible]?

Item 5. "I can't figure [illegible] out."

______ a. Do you mean you do not understand why [illegible] with you?

______ b. You're just afraid to ask her out.

______ c. Don't be silly. Ask her out.

______ d. You seem worried that she will say no if you ask her out. Is that right?

APPENDIX D15

DISCUSSION OF RESPONSES TO EXERCISE "Active Listening"

The item numbers have been scrambled so that you will not accidentally look at the responses for the following item.

Item 1 a ... WS. A simple swap of the word "great" for "going very well." The listener has not revealed his interpretation of the original speaker's message. He has not disclosed his guess about what the original speaker likes about what is happening in the class.

b ... P. The listener has guessed that the speaker meant he particularly liked working in groups. The listener then asks the speaker if this is what was meant by using the stem statement, "Do you mean . . ." The listener is checking his guess to see if there was understanding.

Item 4 a ... N. The listener has not checked his guesses about the other person's ideas or feelings. He merely states his agreement with what he believes the speaker meant and states that he also feels confused. This reveals his guess that the speaker was feeling confused. However, he does not check the guess out. Both of the listener's short statements imply that he thinks he has guessed correctly. If the guesses are wrong, this may leave the speaker feeling disappointed and frustrated because he has been misunderstood and labelled as confused.

b ... N. The listener seems to have guessed that the speaker was worried and that he was worried about his exam record. Neither the guess about his feelings nor the guess about the meaning of his words has been checked out. Rather, the listener has begun to give advice based on his guesses. If his guesses are in error, the original speaker may feel resentment for having been misunderstood and having been given inappropriate advice.

c ... PC. Here the listener is primarily interested in the speaker's feelings. The listener has guessed that the speaker is feeling fearful about the exam and particularly fearful about failing. Using the stem statement, "Do you mean . . .? with a tone of concern and interest, the listener actively checks his guess about the speaker's feelings. It would be important here that he communicates a sincere interest in checking for shared understanding. A mocking or derisive tone of expression using the same words would not be classed as a perception check.

d ... P. Here the listener is primarily interested in the ideas or verbal meaning of the speaker. The listener actively checks out his interpretation of what the speaker said to see if his guessed meaning was the same as the meaning intended. He does this by using the paraphrase stem, "Do you mean . . ." then stating his guess about the verbal meaning of the speaker's messages.

Item 2 a ... PC. The listener has made a guess about the speaker's feelings. In the act of perception checking, the listener has stated his guess that the speaker was feeling discouraged and then checked out his guess by asking the speaker if his guess was correct.

b ... P. Here the listener has made a guess about the verbal meaning of the speaker's comment. In the act of paraphrasing, the listener has asked the speaker if he meant what the listener has interpreted. This gives the speaker the opportunity to say "No" and clarify if the listener's interpretation is wrong or to say "Yes" if he sees that the listener has understood the message as intended.

c ... PT. Here the listener merely repeats the words of the speaker. Nothing new is added. No guess as to the speaker's meaning is revealed. The speaker is likely to say "Yes" in response, but we cannot be certain that they do, in fact, share the same understanding of the speaker's original message.

Item 5 a ... P. The listener uses the stem, "Do you mean . . ." to check out his guess about the verbal meaning of what the original speaker has said. He has clearly revealed that he is guessing that the message is about the speaker's failure to understand why Sally won't go out with him. The original speaker did not mention that Sally wouldn't go out with him, but this was the interpretation made by the listener. As an active listener, he checks this out to see if he, in fact, has understood.

b ... N. The listener states categorically that the speaker is "afraid to ask her out." The listener has made this inference and has not checked it out. Expressed in this way, the speaker is likely to hear it as belittling and ridiculing. This is likely to leave him wishing he had not said anything in the first place. If the inference is incorrect, the speaker may feel resentment, not only for having been labelled but for having been labelled in error.

c ... N. Here again the listener has made an inference about the meaning of the speaker's message and has chosen not to check that inference out. The listener's response, "Don't be silly," is likely to be heard as a put down. The advise "ask her out" may be considered inappropriate if the speaker has, in fact, asked her out. The potential for conflict escalates when the listener acts as if his inferences are true and chooses not to check them out. Conflict is further escalated if the listener responds with a put down statement and advice based on his having made inaccurate inferences about the meaning of the original speaker's message.

d ... PC. Here, the listener checks both his guess about the speaker's feelings (You seem worried) and his guess about the reasons (that she will say no . . .). The key phrase in this perception check is the question at the end, "Is that true?" This question lets the speaker know that the listener's inference is tentative and that the listener is committed to try to understand the speaker. Here, the perception check is a check on the inference that the speaker was feeling worried.

Item 3 a ... N. Responses like this are often deceptive in that they sound like a checkout for meaning, but they in fact are often intended as statements. Although followed by a question "are you" the listener seems to be saying, "Don't get over enthusiastic again." The listener has made an inference/evaluation about what the speaker has said. The listener has revealed his inference/evaluation. However, the style of questioning here is more like probing than paraphrasing. The speaker is likely to react defensively to what can be perceived as a put down response by the listener.

b ... PT. The listener merely repeats the words of the original speaker. The listener does not reveal his own private responses--inferences, guesses--but responds like a parrot with the same words. The potential for misunderstanding seems high.

c ... PC. Here the listener states his guess about the feelings of the speaker. He then follows this inferential statement with the important checkout phrase "is that right?" By this phrase he lets the original speaker know that he treats his inferences as tentative and wants to find out the true feelings of the speaker. This leaves the speaker with a sense of freedom to say "Yes, you understand me" or to say "No" and to describe more accurately his feelings.

d ... P. Here the listener states two of his guesses about the verbal meaning of the speaker's original message and with the stem phrase, "Do you mean . . ." asks the speaker if either of these guesses was what was meant by the speaker. The speaker thus has the opportunity to clarify if he or she needs it.

APPENDIX D16

TIME INVESTMENT FOR INCREASED TEAM EFFECTIVENESS

Active listening skills can improve team effectiveness in three ways:

(1) For tasks which require the pooling and sharing of ideas, active listening promotes understanding which in turn insures that most good ideas will be heard and possibly utilized.

(2) Member commitment to the team will be high if members feel that their ideas have been heard and understood. If commitment is high, members will be more active in contributing ideas. This should increase the available pool of ideas. Members will also be more willing to listen to and accept decisions and more willing to carry out those decisions.

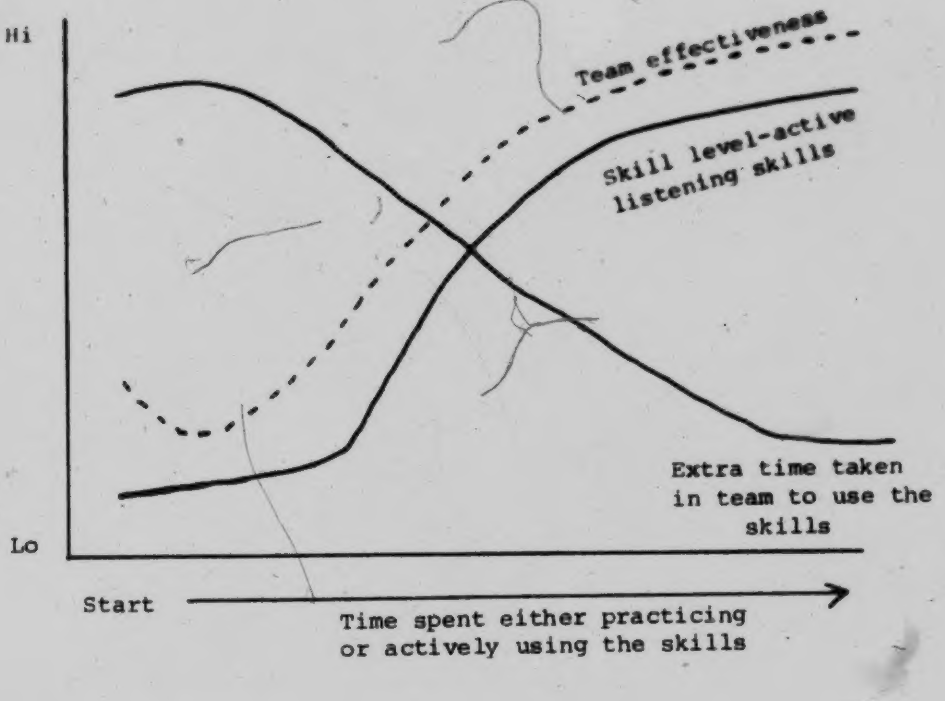
(3) Members will develop greater creative abilities as they actively participate in problem-solving tasks. Thus, there is a greater creative potential for the team as a whole.

Initially, the time cost to use active listening skills is high. This is because practice is necessary to become quick in using a new skill. Also, persons must learn to recognize when there is a need to take the time to use the skills. Also, the initial skill level will be low. One reason for this is that persons have a tendency to use word swaps rather than paraphrases and persons often become confused and frustrated when they start trying to actively understand others.

With consistent practice, time cost will fall and skill level will increase.

Initially, overall team effectiveness will drop due to the high initial time cost and low initial skill level. But effectiveness should then increase to above the initial level of team effectiveness as time cost drops and skill increases.

Thus, an operating team must consciously choose to make a time investment in order to receive a later benefit in increased effectiveness. These relationships are depicted on the diagram below.


Hi
Lo
Team effectiveness
Skill level-active listening skills
Extra time taken in team to use the skills
Start
Time spent either practicing or actively using the skills

APPENDIX D17

DESCRIPTION OF FEELINGS

A Basic Communication Skill for Improving Interpersonal Relationships

The Problem

--To communicate your own feelings accurately or to understand those of others is difficult.

First, expressions of emotion take many different forms. Feelings can express themselves in bodily changes, in action, and in words.

Second, any specific expression of feeling may come from very different feelings. A blush, for example, may indicate that the person is feeling pleased, but it may also indicate that he feels annoyed, or embarrassed, or uneasy.

Likewise, a specific feeling does not always get expressed in the same way. For example, a child's feeling of affection for his teacher may lead him to blush when she stands near his desk, to touch her as he passes her, to watch her as she walks around the room, to tell her "You're nice," to bring his pet turtle to show her, etc.--different forms of expression for the child's feeling of affection.

Communication of feelings, thus, is often inaccurate or even misleading. What looks like an expression of anger, for example, often turns out to result from hurt feelings or from fear.

A further obstacle to the accurate communication of feelings is that your perception of what another is feeling is based on so many different kinds of information. When somebody speaks, you notice more than just the words he says. You note his gestures, voice tone, posture, facial expression, etc. In addition, you are aware of the immediate present situation--the context in which the interaction is occurring. You are aware of whether somebody is watching, for example. And so you make assumptions about how the situation influences what the other is feeling. Beyond all of this, you also have expectations based on your past experiences with the other.

You make inferences from all of this information--his words, nonverbal cues, the situational context, your expectations of the other. These inferences are influenced by your own current emotional state. What you perceive the other to be feeling, then, often depends most upon what you are feeling (e.g., to be afraid of or wishing for) than upon the other person's actions or words. For example, if you are feeling guilty about something, you may perceive others as angry with you. If you are feeling depressed and discouraged about yourself, others may seem to be expressing disapproval of you.

And so--communicating your own and understanding the feelings of others is an extremely difficult task. And yet, if you wish others to respond to you as a person you must help them understand how you feel. Likewise, if you are concerned about the other as a person and about your relationship with him, you must try to understand his emotional reactions.

The Skill

Although we usually try to describe our ideas clearly and accurately, we often do not try to describe our feelings clearly. Feelings get expressed in many different ways, but we do not usually attempt to identify the feeling itself.

One way to describe a feeling is to identify or name it. "I feel angry." "I feel embarrassed." "I feel comfortable with you." However, we do not have enough names or labels to encompass the broad range of human emotions and so we invent other ways to describe our feelings such as the use of similes. "I feel like a tiny frog in a huge pond." A girl, whose friendly overture had just been rebuffed, said, "I feel like I have just had an arm amputated."

A third way to describe a feeling is to report what kind of action the feeling urges you to do. "I feel like hugging and hugging you." "I'd like to slap you." "I wish I could walk off and leave you."

In addition, many figures of speech serve as descriptions of feeling. "I just swallowed a bushel of spring sunshine."

Describing Your Own Feelings

You try to make clear what feelings you are experiencing by identifying them. The statement must (1) refer to "I," "me," or "my," and (2) specify some kind of feeling by name, simile, action, urge, or other figure of speech.

The following examples show the relation between two kinds of expressions of feeling, (1) those that describe what the speaker is feeling, and (2) those that do not. Notice that expressions of feeling which describe the speaker's emotional state are more precise, less capable of misinterpretation, and, thus, convey more accurately what feelings are affecting the speaker.

Expressing feeling by describing your emotional state	*Expressing feeling without describing your emotional state*
"I feel embarrassed." "I feel pleased." "I feel annoyed."	Blushing and saying nothing.
"I feel angry." "I'm worried about this." "I feel hurt by what you said."	Suddenly becoming silent in the midst of a conversation.
"I enjoy her sense of humor." "I respect her abilities and competence." "I love her but [illegible]el I shouldn't say so."	"She's a wonderful person."
"I hurt too much to hear any more." "I feel angry at myself." "I'm angry with you."	"Shut up!"

Because emotional states express themselves simultaneously in words, in actions, and in physiological changes, a person may convey contradictory messages about what he is feeling. For example, his actions (a smile or laugh) may contradict his words (that he is angry). The clearest emotional communication occurs when the speaker's description of what he is feeling matches and, thus, amplifies what is being conveyed by his actions and other nonverbal expressions of feeling.

The aim in describing your own feelings is to start a dialogue that will improve your relationship with the other. After all, others need to know how you feel if they are to take your feelings into account. Negative feelings are indicator signals that something may be going wrong in a relationship with another person. To ignore negative feelings is like ignoring a warning light that indicates that an electrical circuit is overloaded. Negative feelings are a signal that the two of you need to check for misunderstanding and faulty communication.

After discussing how each of you sees the situation or your relationship, you may discover that your feelings resulted from false perceptions of the situation and of his motives. In this case, your feelings would probably change. However, the other may discover that his actions are arousing feelings in you that he wasn't aware of--feelings that others beside you might experience in response to his behavior --and he may change.

In short, describing your feelings should not be an effort to coerce the other into changing so that you won't feel as you do. Rather, you report your inner state as just one more piece of information that is necessary if the two of you are to understand and improve your relationship.

APPENDIX D18

AN EXERCISE IN COMMUNICATION OF FEELINGS BY WORDS

Procedure

This exercise is designed to help you learn as you go through it. It is not a test. For this reason, do not mark all items at once. Rather, follow the steps outlined below:

1. Read the introduction.

2. Mark your response to item one only.

3. Go to the sheet entitled "discussion of responses" and compare your answer and reasons with the answer and reasons for item one.

4. Repeat steps 2 and 3 for item 2. Continue this process of working with one item at a time until you complete the test.

Introduction

Any spoken statement can convey feelings. Even the factual report, "It's three o'clock" can be said so that it expresses anger or disappointment. However, the words do not convey the feelings; the speaker's voice tone, emphasis, gestures, facial expression carry the message of anger or disappointment.

The content of some sentences, however, expresses feelings even when you cannot see or hear the speaker himself. The kind of sentence itself reveals that feelings are present in the speaker.

In each set below, all the sentences convey feeling, i.e., any of them could have been spoken by the same person in the same situation. Each sentence, however, may be either of two different ways of communicating feelings by words.

1. The sentence conveys feeling by describing what the speaker is feeling. (Examples: "I am disappointed." "I enjoy you.") The emotional state of the speaker is the content of the sentence. The speaker's feeling is described by a word or phrase such as "disappointed" or "left out."

2. The sentence conveys feeling but does not describe what the speaker feels. (Examples: "Oh Heck!" "I thought you'd never get here." "Get out!") Strong feeling obviously is behind each of the examples, but the statement does not describe the feeling itself.

. . .

Put a D before each sentence below that conveys feeling by describing the speaker's feeling.

Put a No before each sentence that conveys feeling but does not describe what it is.

Item 1 (_____) a. Shut up! Not another word out of you.

(_____) b. I'm really annoyed by what you just said.

Item 2 (_____) a. Can't you see I'm busy? Don't you have eyes?

(_____) b. I'm beginning to resent your frequent interruptions.

(_____) c. You have no consideration for anybody else's feelings. You're completely selfish.

Item 3 (_____) a. I feel discouraged because of some things that happened today.

(_____) b. This has been an awful day.

Item 4 (_____) a. You're a wonderful person.

(_____) b. I really like you.

Item 5 (_____) a. I feel comfortable and free to be myself when I'm around you.

(_____) b. We all feel you're a wonderful person.

(_____) c. Everybody likes you.

Item 6 (_____) a. If things don't improve around here, I'll look for a new job.

(_____) b. Did you ever hear of a place to work as lousy as this one?

(_____) c. I'm afraid to admit that I need help with my work.

Item 7 (_____) a. This is a very poor exercise.

(_____) b. I feel this is a very poor exercise.

Item 8 (_____) a. I feel inadequate when teaching that particular subject.

(_____) b. I am inadequate in teaching that particular subject.

Item 9 (_____) a. I am a failure--I'll never amount to anything.

(_____) b. That teacher is awful. He didn't teach me anything.

(_____) c. I'm depressed because I did so poorly on that test.

Item 10 (_____) a. I feel lonely and isolated in my group.

(_____) b. For all the attention anybody pays to what I say I might as well not be in my group.

(_____) c. I feel that nobody in my group cares whether I'm there or not.

John L. Wallen
Northwest Regional Educational Laboratory
Portland, Oregon
January, 1969

APPENDIX D19

DISCUSSION OF RESPONSES TO EXERCISE IN COMMUNICATION OF FEELINGS BY WORDS

The item numbers have been scrambled so that you will not accidentally look at the responses for the following item.

Item 1 a ... No. Commands such as these convey strong emotion without describing what kind of feeling underlies the commands.

b ... D. The speaker describes himself as feeling annoyed.

Item 7 a ... No. A negative value-judgement. It conveys that the speaker has negative feelings but does not say what kind they are.

b ... No. Although the speaker begins by saying, "I feel . . . ," he does not then tell what he is feeling. Instead, he passes a negative value-judgement on the exercise. Note that merely tacking the words "I feel" on the front of a sentence does not make a description of feeling. People often say "I feel" when they mean "I think" or "I believe." For example, "I feel the Yankees will win" or "I feel it will rain tomorrow."

The speaker could have said that he felt confused or frustrated or annoyed. He would then have been describing his feelings without evaluating the exercise itself.

Although we can disagree with the value-judgement expressed by Another, we should not deny that he feels whatever he feels. For example, if Joe says the exercise is poor and Jill says it is good, they may argue about which it "really" is. However, if Joe says he was frustrated by the exercise and Jill says she was pleased and stimulated by it, no argument should follow. Each person's reaction is what it is. Of course, discussing what led each to feel as he does may provide helpful information about each person and about the exercise itself.

Many persons who say they are unaware of what they feel habitually state value-judgements about others without recognizing that this is the way their positive or negative feelings get expressed.

Item 10 a ... D. Conveys feelings by describing the speaker as feeling lonely and isolated.

b ... No. Conveys negative feelings without telling whether the speaker feels angry, lonely, disappointed, hurt, or what.

c ... No. Instead of "I feel" the speaker should have said "I believe." The last part of the sentence really tells what the speaker believes the others feel about him and not what he feels.

Expressions c and a relate to each other as follows: "Because I believe that nobody in my group cares whether I am there or not, I feel lonely and isolated."

Item 4 a ... No. A value-judgement that expresses positive feelings about the other without describing what they are. Does the speaker like the other, respect him, enjoy him, admire him, love him, or what? He does not say.

b ... D. The speaker's positive feeling is described as liking.

Item 2 a ... No. The questions convey strong feeling but do not describe what it is.

b ... D. The speaker's feeling is described as resentment.

c ... No. The speaker's accusations about the other convey strong negative value-judgements. Lacking is a clear expression of how the speaker feels about the other being judged or specific descriptions of the other's behavior which have led to this evaluation.

Item 6 a ... No. Conveys negative feelings by talking about the condition of things in this organization instead of about the speaker's inner state.

b ... No. A question that expresses a negative value-judgement about the organization but does not describe what the speaker is feeling.

c ... D. A clear description of how the speaker feels in relation to his job. He feels afraid.

Expressions a and b are criticisms of the organization that could come from the kind of fear described in c. Notice that expressions that express anger may result from fear. Many expressions of anger are the result of fear, hurt feelings, disappointment, or loneliness.

Item 9 a ... No. The speaker has passed judgement on himself and labelled himself a failure. The statement does not describe what he is feeling.

b ... No. Instead of taking it out on himself, the speaker blames the teacher. This is another value-judgement but not a description of feelings.

c ... D. Conveys feeling by describing the speaker's emotional state--he feels depressed.

Expressions a and c illustrate the important difference between passing judgement on oneself and describing one's feelings. Feelings can and do change. To say that I am depressed does not imply that I will or must always feel the same. However, if I label myself as a failure--if I truly think of myself as a failure--I increase the probability that I will act like a failure. One woman stated this important insight for herself this way, "I always thought I was a shy person. Now I have discovered that I am not shy, although at times I feel shy." No longer did she keep herself from trying new things she wanted to be able to do by reminding herself that she was too shy for them.

Item 5 a ... D. A clear description of how the speaker feels when with the other.

b ... No. "You're a wonderful person" is a value-judgement and not a description of feeling. Secondly, the speaker does not speak for himself but hides behind the phrase "we feel."

c ... No. It is true that a feeling is named in the statement, but the speaker refers to everybody and does not make clear that the feeling is in him. A description of feeling must contain "I," "me," "my," or "mine," to make clear that the feelings are the speaker's own--are in him.

Does it seem more affectionate to you for a person to tell you "I like You" or "Everybody likes you"? Do you find it more difficult to tell another "I like you" or "Everybody likes you"?

Item 8 a ... D. Describes himself as feeling inadequate.

b ... No. Careful! This sounds much the same as a. However, it says that the person actually is inadequate--not just feels this way. The speaker has passed a negative judgement on himself and labelled himself as inadequate.

This subtle difference was introduced because many people confuse feeling inadequate with being inadequate. A person may feel inadequate when teaching a certain subject and yet do an excellent job of it. Likewise, he may feel adequate and competent in a subject and yet perform poorly.

One sign of emotional maturity may be that a person can perform adequately even when he feels inadequate to the task. He does not let his feelings keep him from doing the best he can because he knows the difference between feelings and performance and that the two do not always match.

Item 3 a ... D. The speaker describes himself as feeling discouraged.

b ... No. Conveys negative feelings without describing what they are. The statement appears to tell what kind of day it was when, in fact, it is an expression of the way the speaker is feeling. We cannot tell from an expression like this whether the speaker feels depressed, annoyed, lonely, humiliated, rejected, or what.

John L. Wallen
Northwest Regional Educational Laboratory
Portland, Oregon 97204
January, 1969

APPENDIX D20

FEELINGS

The way we deal with emotion is the most frequent source of difficulty in our relations with others. Although each of us continually experiences feelings about others and about himself, most of us have not yet learned to accept and use our emotions constructively. Not only are we uncomfortable when others express strong feelings, in addition, most of us do not even recognize, much less accept, many of our own feelings.

We know, intellectually, that it is natural to have feelings. We know that the capacity to feel is as much a part of being a person as is the capacity to think and reason. We are aware of incompleteness in the one who seems only to think about life and does not seem to feel --to care about, enjoy, be angered and hurt by what goes on around him. We know all this, and yet we feel that feelings are disruptive, the source of obstacles and problems in living and working with others.

It is not the feelings that are the source of difficulty in our relations with others, but the way we deal with them, our failure to use them.

Because of our negative attitude toward emotions, because of our fear of and discomfort with our feelings, we spend much effort trying, in one way or another, to deny or ignore them. Look around you and observe how you and others deal with feelings. Make your own observations and see if they support or contradict the point that our usual response is some variation of "Don't feel that way."

To the person expressing disappointment, discouragement, or depression, we say things like "Cheer up!" "Don't let it get you down." "There's no use crying over spilt milk." "Things will get better." In short, "Don't feel that way." To the sorrowing or hurting person, we advise "Don't cry. Put your mind on something pleasant." We tell the angry person, "Simmer down. There's no point in getting angry. Let's be objective." To the person expressing joy and satisfaction in something he has done, we caution, "Better watch out. Pride goeth before a fall." In our various group meetings, we counsel each other, "Let's keep feelings out of this. Let's be rational."

Another sign of the difficulty we all experience with feelings is that the more distant and remote the feelings, the more comfortably we discuss them. Try to pay attention to yourself and others when talking about feelings and ask "How distant are these feelings?" I predict that you will find relatively few discussions of feelings that someone is having "right now" in comparison with the number of discussions about feelings they had in the past toward somebody else. Do you find that you talk more easily about feelings you had in the past than about feelings you have right now? Do you find that you talk more easily about feelings toward somebody else than about your feelings toward persons who are present? As you observe yourself and others discussing feelings, see whether the following scale roughly represents what you find.

Most Distant		*Least Difficult to Discuss*
....	I tell you how one person felt toward another, neither person being present, e.g., "Joe was angry with Jim."	....
....	I tell you my past feelings about somebody not present, e.g., "I was angry with her."	....
....	I tell you my present feelings about somebody not present, e.g., "I am angry with her."	....
....	I tell you my past feelings about you, e.g., "I was angry with you last month when you . . ."	....
....	I tell you my present feelings about you, e.g., "I am angry with you."	....
Here and Now		*Most Difficult to Discuss*

In general, the closer the feelings are to here-and-now--to you and me in this present moment--the more difficult they are to discuss openly. The scale above implies many more subdivisions than shown. For example, it implies that I am more comfortable telling you that I was angry with you a year ago than that I was angry with you last week. The former topic is much more distant. Likewise, I can more easily tell you of last week's anger than of my annoyance with you yesterday.

This scale doesn't mean that people do not get angry in the present or even that they do not act angry, only that to openly discuss one's present anger is more difficult than to discuss one's past anger.

Why are we uncomfortable in dealing with feelings, both our own and others? What is it that leads us to try to deny or ignore present feelings? Why do we look upon emotions as problems? I believe it is that we recognize that we have less control over what we will feel than over what we will do.

I see myself as in control of my own actions. If I wish to run, I do so. When I wish to stop running, I stop. I can even decide longer spans of action, such as deciding to take a trip to the coast for the weekend, and then carry out my intention.

With somewhat less certainty, I see myself as usually able to control my thoughts. If I wish to plan a trip to the coast, I can think about that. If I wish to think about last week's trip, I do so. When I am unable to stop thinking of something it is usually because some strong feeling has been aroused.

My feelings, by contrast, seem to have a life of their own. I cannot start and stop them as I can my actions. My wish to feel happy does not lead me to feel happy. I cannot decide to feel love for a person and then feel it. I cannot keep myself from feeling fear just by deciding not to be afraid, although I can carry out an intention not to show my fear, not to run away. I have less control over what I will feel than over what I will do.

Feelings are spontaneous responses to factors over which we have little direct control. To control the arousal of our feelings, we attempt to arrange the environment so that it will evoke the feelings we desire and not those we wish to avoid. Much of the interaction between persons can be viewed as an effort by each to control which feelings will be aroused. That is, I try to get you to act in ways that will elicit feelings in me that I desire and not those I dislike. You, in turn, attempt to get me to act in ways that will have a similar effect on your feelings. Each of us, thus, tries to control the relationship (and the other's behavior) as a way of controlling his own feelings.

Others seem to have more control over what we will feel than we ourselves have. People usually say, "You made me angry," rather than, "I've become angry." One popular song declared, "You made me love you. I didn't want to do it." Maybe our discomfort with our own feelings springs from a belief (a recognition?) that to feel something toward another is to surrender some of our control of self to him. Certainly, if we believe that the other "made" us angry or "made" us love him, he has some control over us.

Paradoxically, however, if we hold the other responsible for our anger, we probably expect that he should stop his annoying behavior because we feel angry. Our anger, then, is not just a felt inner state, but is felt as a claim against the other. Likewise, if we feel that the other "made" us love him, we will probably expect him to return our affection. Note your own tendency when somebody expresses affection for you to feel that you should reciprocate, a "you're-nice-too" effect.

I believe much of our discomfort with our own and others' feelings arises because interpersonal feelings precipitate a struggle for control between persons. Which of us will yield and thus give up some of his own identity? Do I have control over you because I can make you angry? Do you have control over me because you get angry or hurt when I act in a certain way? You and I must come to some shared understanding of the meaning of your feelings of anger, of my feelings of being hurt, of your feelings of affection, of my feelings of inadequacy around you. Are the feelings each of us has about the other really claims on the other, obligations to be and act in a certain way? Or are our feelings phenomena to be accepted and then understood. Your anger may tell us something about you and about me, if we can understand it.

To interact with another is to risk having feelings aroused by him and to risk arousing feelings in him. You and he cannot turn on and turn off your feelings toward each other merely by wishing or deciding to. Unless you avoid each other totally and forever, you much each share some of yourself with the other. To feel something toward another--whether anger, disgust, fear, interest, enjoyment--is to become related, interdependent, with the other. Most of us seem to feel that to be interdependent with another is to lose some of our control over our own life. Feelings, thus, seem to threaten our voluntary, planful control over our own affairs.

APPENDIX D21

AWARENESS CATEGORIES

I. Feelings (F):	Awareness of feelings, body sensations, action urges, and fantasy metaphors/similes.
Feelings	"I feel good" "I feel jealous" "I feel angry" "I like you" "I'm happy"
Body Senses	"My heart is racing" "My palms are sweaty" "I'm light headed"
Action Urges	"I feel like leaving the room" "I have an urge to yell" "I want to hug someone"
Fantasies	"We remind me of store mannequins" "I imagined my parents were watching" "We seem like a garden of flowers"
II. Observations	Awarenesses of things which can be experienced by the senses of sight, hearing, etc. These can also be observed by others.
What I see	"I saw Jim's eyes lowered" "Mary was blushing"
What I hear	"I heard the door open" "I heard laughter"
III. Thoughts	Awareness of thoughts, ideas, inferences, evaluations.
Thoughts	"This morning's exercise was improper" "Why do people do things they don't want to do?" "What is 15 times 23?" "Plan A is better than Plan B"
Inferences	"Jim was embarrassed" "Mary was shy" "This exercise was designed to show how difficult it is to meet strangers"

Evaluations	"These ideas are for children, not adults" "That's a poor idea" "You're an idiot"

APPENDIX D22

AN EXERCISE IN "AWARENESS CATEGORIES"

Procedure

This exercise is designed to help you learn as you go through it. It is not a test. For this reason do not mark all items at once. This is a programmed learning exercise. You do not move on to a new item until you have discussed your answer to the first item with others in your team or group. Follow the steps outlined below:

1. Read the introduction.
2. Mark your responses to item one only.
3. Discuss your response with your team or group exploring the reasons group members used for marking their responses as they did.
4. Refer to the sheet entitled "discussion of responses" and compare your answer and reasons with the answer and reasons for item one. Discuss any descriptions within your group until you are sure everyone understands the reasons in the "discussion of responses" sheet.
5. When you have fully discussed item one and are certain you have full understanding of the reasons presented, then move on to item two and repeat the process. Continue this process of working with one item at a time until you complete the exercise.

Introduction

Each of us has what we call an awareness continuum. This awareness continuum is our own private sequence of awarenesses that we have as we move through time. Our awareness changes with each moment. At any given moment, we might be aware of one of/some of/or all of the following experiences: (a) our thoughts and ideas, (b) our observations of the world around us, and/or (c) our feelings or internal body world.

Characteristically, in our culture we are taught we we "should not be too emotional" or "should control our feelings" or "should be more rational." From experience many people learn that it is safer to try and hide their feelings from others than it is to reveal them by word or expression. One consequence of this learning is that we also learn to devote less of our awareness to our feeling or internal body world.

This has negative implications for our communication with others. In order to achieve shared understanding, others may need to understand our feelings as well as our ideas. In order to help achieve this understanding, we first require awareness of our feelings and, secondly, we require the skills with which to clearly communicate our feelings to others. This exercise is a step in the direction of expanding your awareness of your feelings by helping you to learn to discriminate between the three different kinds of awareness.

Expanding your own awareness of your feelings serves another function. By becoming more aware of your feelings and your internal body world, you will probably achieve more understanding of your own behavior. You will be more aware of the relationship between how you feel and how you behave. You may come to understand your own reactions to the world around you when you achieve awareness of your feelings.

Look at the set of items following. In each set there will be several awareness statements. These awareness statements will be either:

1. Thoughts: awareness of inferences, evaluations, ideas, and thoughts.
2. Observations: awareness of things which can be experienced by the senses of sight, hearing, taste, touch, smell. These can also be observed by others.
3. Feelings: awareness of feelings, body sensations, and action urges.

Place a T before each statement that you think is a Thought.

Place an O before each statement that you think is an Observation.

Place an F before each statement that you think is a Feeling.

Item 1 (_____) a. I saw that Mike was flushed.
(_____) b. I was aware that Mike might be embarrassed.
(_____) c. I am worried about Mike.

Item 2 (_____) a. I am aware of your anger.
(_____) b. I am afraid of you when you shout.
(_____) c. I feel that your shouting is harmful.

Item 3 (_____) a. My head is throbbing.
(_____) b. I hear drums beating.

(_____) c. I'm wondering who is beating the drum.

Item 4. (_____) a. I am angry.
(_____) b. I feel that you are angry.
(_____) c. I feel like hitting you.

Item 5 (_____) a. I saw that Al was acting suspiciously.
(_____) b. I felt the hardness of the floor on my feet.
(_____) c. I am aware of wanting to leave.

Item 6 (_____) a. That smells good to me.
(_____) b. I smell something like the aroma of fresh baked pie.
(_____) c. That stinks!
(_____) d. I felt sick when I walked into the smells of the room.

Item 7 (_____) a. I felt you touching my arm.
(_____) b. I was aware of how affectionate you were.
(_____) c. I feel very happy right now.

APPENDIX D23

DISCUSSION OF RESPONSES TO EXERCISE IN AWARENESS CATEGORIES

The item numbers have been scrambled so that you will not accidentally look at the responses for the following item:

Item 1 a ... O. An observation of an external event (the flushing of Mike's face). Others could have observed this event as well.

b ... T. An inference about Mike's feelings. The speaker is thinking that Mike might be embarrassed.

c ... F. A description of feeling. The speaker describes his feeling as "worried."

Item 7 a ... O. An observation made with the sense of touch. Although others would not have observed this by their sense of touch, it is nonetheless an observation that could be verified by others via sight.

b ... T. The person is thinking about the other person and interpreting the other person's behavior as affectionate. This is not an observation in that it does not describe specific observable events. This is a thought, labelling a set of behaviors as affectionate.

c ... F. A clear description of feeling with the additional reference to a specific moment in time--"right now."

Item 4 a ... F. A clear "I" statement of feeling. Although the speaker does not use the word feel, he uses the stem "I am" to describe his predominant feeling state of anger.

b ... T. An inference about the feelings of the other person. The phrase "I feel that" can be translated as "I think that . . ." The speaker is thinking that the other person is feeling anger.

c ... F. An awareness of an action urge. Action urges are considered to be feeling states in that they are strongly felt urges to take some bodily action.

Item 2 a . . . T. An inference about the other person's feeling state. This is not a feeling awareness in that it does not describe the feelings of the speaker. This is not an observation in that it does not describe specific observable behaviors that led the speaker to the inference that the person he was observing was angry. He probably saw some behavior, "I am aware that you are clenching your fist,"--then made his inference about anger--"I am aware of thinking you are angry."

b . . . F. A clear statement of feeling with reference to a specific time when the feeling is felt. The awareness is expressed using the stem "I am." In this way, the person describes himself as feeling afraid.

c . . . T. An evaluation and thought about the behavior of someone else. Although the speaker uses the phrase "I feel . . ." he has not clearly communicated what his internal body or feeling state is. He might be feeling frightened, angry, hurt, sad, or relaxed, depending upon his involvement in this situation. He has not expressed a clear awareness of what he is feeling. The phrase "I feel that . . ." is most typically followed by an inference, evaluation, or idea.

Item 6 a . . . T. An evaluation. This awareness is actually a thought process about the quality of something observed with the sense of smell. He has not described the smell or expressed his awareness as an awareness of smelling something so this is not an observation. He has not described his feelings at the time of the awareness of the smell. He might be feeling joy, excitement, eagerness, impatience, or relief. As we have to guess as to his feelings, this is not a clear feelings awareness.

b . . . O. A reference to an awareness of smelling something. The person has made an observation with his sense of smell. This observation could be verified by others.

c . . . T. An evaluation. The speaker's awareness is directed at evaluating the smells he has observed.

d . . . F. A description of a body or feeling state at a point in time in which the person became aware of the smells in the room.

Item 3 a . . . F. A description of a body sense. This is a private body experience. Body senses are considered to be feeling experiences in that they are only observable by the person having the body sense and in that they are not inferences, evaluations, or ideas about external events. Body senses are good indicators of feeling reactions to external events. For example, a throbbing head may be a feeling response of tension, anger, fear, or frustration in response to something that is happening outside of the person. Attention to these body experiences or body senses may help clarify feeling states.

b ... O. An awareness of an event external to the speaker that could be observed and verified by others.

c ... T. A computer-like process of guessing about the meaning of something observed. The person is thinking and making inferences about who is beating the drum. This awareness does not describe feeling states. He may be feeling frightened, curious, angry, or irritated.

Item 5 a ... T. An evaluation of Al's behavior as suspicious. The awareness does not refer to the specific observed behaviors but rather to a thinking process involving evaluation.

b ... O. Although the awareness is expressed as "I felt," the awareness is predominantly an awareness of an observation of an external event made via the sense of touch. This is not an internal body sense nor a description of a feeling state. This is an observation that could be verified by others in the same way.

c ... F. An action urge describing a felt state of needing to leave the situation. As an action urge, the awareness is of a strong feeling or compulsion to do something. These action urges can be helpful clues to the feeling states we are in at the time of having the action urge. An action urge to leave may be associated with a feeling of fear, boredom, or anger.

APPENDIX D24

BLOCKING BEHAVIORS

Goals

1. To be able to recognize blocking behaviors.
2. To understand the process of blocking behaviors.
3. To demonstrate the impact of blocking behaviors.
4. To be able to identify one's own blocking behavior.
5. To learn alternate ways of handling blocking behaviors, both one's own and others.

After watching the video role play of the family, ask yourself the question, "What does each member of the family want to do the next day?"

Dad	*Mom*	*Son*	*Daughter*
The museum	What Dad wants is fine.	Something fun. Not what Dad wants.	Swimming? Gondola? Fishing?

Notice that mom and son have not expressed their desires in terms of specific activities and that daughter has mentioned several things but has not stated any indication of preference.

PERSONS USING BLOCKING BEHAVIORS DO NOT EXPRESS THEIR OWN NEEDS CLEARLY

Next, spend some time describing each of the actors' behaviors.

Father is RATIONAL

- no paraphrasing
- no perception checking
- doesn't comment on others' ideas
- said he favored the museum
- uses logical constructions
- speaks very often
- makes a decision without a vote

Son is BLAMER

- no paraphrasing
- no perception checking
- doesn't comment on others' ideas except to say he didn't like dad's
- doesn't say what he wants
- uses the words always, never, and generalizes

- said it is a democratic family
- repeated his arguments

Mother is PLACATER

- no paraphrasing
- no perception checking
- comments on others' ideas
- doesn't state what she wants directly
- looks at others
- suggests to others that everything will work out or that others not worry about their needs
- gives promises
- voice is soft
- hands come inward toward her

- starts sentences with "you" followed by an inference
- he points or makes hand sweeps away from himself
- doesn't look at others very often

Daughter is IRRELEVANT

- no paraphrasing
- no perception checking
- doesn't comment on others' ideas
- doesn't say what she wants directly
- changes the subject frequently
- goes off topic
- hands fidget
- starts many sentences with "you" followed by an inference

From these descriptions a common feature of Blocking Behaviors can be seen. None use active listening skills (paraphrasing and perception checking). Little attention is paid to others' ideas.

Characteristics of each of the four styles are:

Rational:	uses logical constructions, doesn't respond to or express feelings directly.
Blamer:	generalizes using the words always and never and starts many sentences with the word "you" followed by a negative evaluative inference about the other person. E.g., "You always make the decisions for everybody."
Placater:	comes on softly and as if she is concerned for others. Suggests to others that all will be well in time and to not pay attention to their feelings.
Irrelevant:	changes the subject frequently, goes off topic of discussion frequently.

The impact on the family unit or group is disruption. Clearly, the family will not be able to agree upon a mutually satisfying activity if they don't spend some time actively listening to each others' desires. And, being cut off from expressing one's feelings often leads to a sense of frustration and confusion. Frustrated, confused individuals don't make a very happy group.

Virginia Satir states that all of us play each of these four blocking roles at some time or another; none is unique to any one person. Nor are these roles sex-typed; for example, moms can be blamers, rational, or irrelevant and sons can be placaters, irrelevant, or rational.

By practicing these four roles, a person becomes aware when he begins to use them at some future time. He can then stop himself and begin using the active listening styles and begin expressing his feelings and ideas more directly. This is a fourth awareness exercise.

Methods of dealing with persons using blocking behaviors will be discussed in the constructive feedback and appropriate openness module.

APPENDIX D25

EXAMPLES OF BLOCKING ROLES

Role: Placater

A placater tries to sooth over other persons' feelings. The effect of this message is "don't have the feelings you have" or "things will be o.k. if we just don't have feelings which are strong or negative."

Examples: "Don't worry."
"Don't get so excited."
"Relax. We'll find a solution."
"Let's work things out peacefully."
"You'll get your way next time."
"In time things will work out."

Role: Rational/Denying Emotions

The rational, denier-of-emotions acts as if all problems are of a logical sort and as if human emotions should not be allowed to come into play in decision-making. This person would not perception-check, express his own feelings, or respond to another's feelings. The message is "let's get down to business and think this thing through."

Note that rational discussion is not in itself blocking. Rationality is a keystone of much of human planning. Rather, it is rationality coupled with the complete absence of attention to emotions which characterizes this role.

Role: Irrelevant

An irrelevant person changes the subject, shifts off to ideas which are not directly related to the subject, and puts others off occasionally. This is done in such a way that it is not obvious to others. The questioning mode is effective because it forces another person to answer about a subject which is off topic.

Role: Blaming

A blamer overgeneralizes and does not use specific behavior descriptions. The words "never" and "always" are frequently utilized.

Messages often begin with a "you" and contain an inference or evaluative inference about the other person.

Examples: "You always want your way."
"You never give in to others."
"Because of you, we always fail to make decisions."
"You never listen."
"Don't you think you should let someone else speak."
"I never get to do what I want to do."
"Isn't it interesting that you win again?"
"Oh, have your way."

APPENDIX D26

CLARIFICATION PROCEDURE

Steps in moving from Inferential Statements to Observations

1. Begin with whatever general label or inference comes to mind. Trying to start with the alternate style is difficult because it's initially not natural and material doesn't flow easily.

   Examples: Dad is a dictator.
   Mom is considerate.
   Son is a rebel.
   Daughter is a pest.

2. Ask: What specifically did the person do or say to make me think so? Try to get descriptive observations.

   Examples: Dad says, "So, it's the museum tomorrow morning."
   Son has expressed disapproval of the museum.
   Dad hasn't taken a vote.
   Daughter hasn't expressed a specific opinion.
   Dad tends to run the meeting process.
   Mom responds to each person with some comment.
   Mom looks at people.
   Mom says, "Whatever you want, dear."
   Mom tells others not to feel bad or that they'll get their way.
   Daughter changes the subject several times.
   Daughter hums while others are talking.
   Daughter interrupts others while they are talking.
   Son emphasizes what he doesn't want to do, but not what he wants.
   Son argues against Dad's ideas.
   Son slumps down in his chair.
   Son leaves the meeting before it is finished.
   Son doesn't look at others.

3. This objective information allows you to look at how the constellation of roles reinforce and help to cause each other. For example, ask yourself what in Dad's behavior causes the response from Son or from Daughter? Also, what in Mom's behavior causes the responses in Son and Daughter.

A general rule is that in any relationship all parties contribute to the problem. It is rarely or never one person's fault. Question of interest: How does each contribute to the problem? For example, how does each of the above persons contribute to the lack of good problem solving and lack of commitment to the family decision?

APPENDIX D27

COMMON BLOCKING BEHAVIORS

Initially, four common blocking behaviors were studied. Besides these four which were Blaming, Rational/Emotional-Denier, Irrelevant, and Placating, there are other common blocking behaviors. This exercise is designed to help you identify others.

Follow the instructions step by step. Do not read ahead.

1. Assume that you are a TV repairman. Last week you took in a set thinking that you knew the problems. You said you'd have the set ready in time for the Grey Cup Parade. Later, upon closer inspection you discovered that you needed to send away for a special part, and the rail strike delayed the arrival of that part. You have worked overtime to try to get the set ready, but with the holiday bottleneck you didn't make it.

   When the customer comes in, the conversation goes as follows:

   CUSTOMER: "I'm Mr. Jones. I'd like to pick up my TV set."

   YOU: "I'm sorry Mr. Jones. It isn't ready yet. We found out it needed a special part and . . ."

   CUSTOMER: (cutting you off) "Not ready yet! You promised me my TV would be fixed in time for the Grey Cup Parade. Why didn't you tell me you weren't sure you'd have it ready. I would have taken it to someone else."

2. Now, without reading ahead, write in the response you think would be most likely the reply you would make if you were the TV repairman.

   YOU: ____

3. Next, write an example of each of the blocking behavior responses listed below:

   a. Threatening or Punishing:

   b. Ridiculing or Belittling:

   c. Contradicting or Denying:

d. Minimizing:

e. Advice-giving and Persuasion:

f. Blaming:

g. Irrelevant:

h. Placating:

i. Rational/Emotional-denier:

3. Now look at your original response and see whether it falls in any of the above categories.

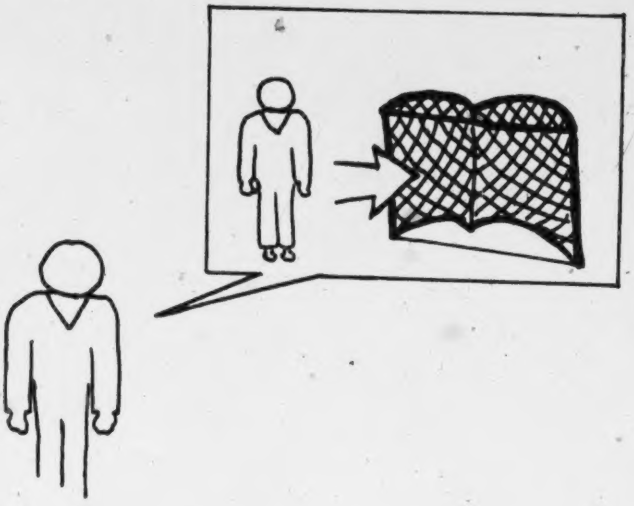
4. Now write a Paraphrase and a Perception Check to contrast the blocking behaviors:

Paraphrase:

Perception Check:

APPENDIX D28

IMPACT OF BLOCKING BEHAVIOR



1.

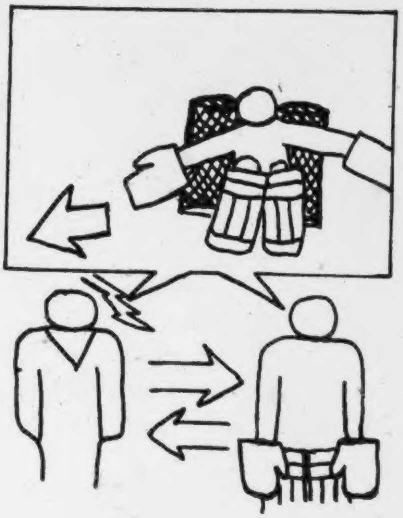
People use communications to express their needs, ideas, and feelings.

This is like trying to get the puck into the goal.

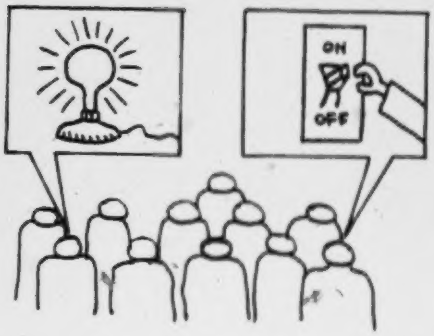
2.

Blocking Behaviors deflect the sender's message.

This is like being a goalie and deflecting the puck.



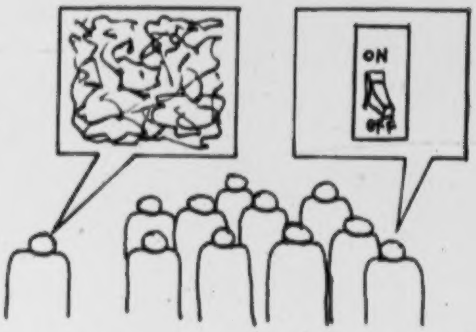
1.



The person on the left is trying to express an idea in a group.

The person on the right sends a blocking message.

2.



The impact of this on the person who had the idea is like flicking off a light switch. His screen becomes clouded with resentment or confusion. Note also that he has moved away from the group.

APPENDIX D29

CONSTRUCTIVE OPENNESS

While difficulties are frequent in human relationships, only rarely do people share their feelings and thoughts about the difficulties they experience with each other. Even in relations that are very important or dear to us, we fear hurting the other, making him angry, or being rejected by him. Because we do not know how to be constructively open, we say nothing. The other continues to be totally unaware of our reaction to his actions. Likewise, we continue to be ignorant of the effect that our actions have on him. As a result, many relationships that could be productive and enjoyable gradually flounder and sink under the accumulated load of tiny annoyances, hurt feelings, and misunderstandings that were never talked about openly.

The purpose of this paper is to explore the concept of constructive openness. We will first introduce the concept of openness with the aid of a diagram and introduce two modes of openness, namely feedback and disclosure. We will then use the communication deck to demonstrate modes of giving and receiving feedback and making disclosures, which are likely to improve a relationship rather than harm it.

The following diagram is a representation of the self. There are four quadrants: the shared area, the blind area, the avoided area, and unknown area.

*THE SELF**

	Known to Self	Not Known to Self
Known to others	Shared Area	Blind Area
Not Known to Others	Avoided or Hidden Area	Unknown Area

FEEDBACK

from others decreases the Blind Area and increases the Shared Area.

ACTIVE LISTENING

brings maximum understanding of disclosure and feedback and thus contributes to increasing the Shared Area.

DISCLOSURE

to others decreases the Hidden Area and increases the Shared Area.

*Luft, J. Group Processes. Palo Alto, California: The National Press, 1963.

The shared area refers to the things I know about myself which are also known to others. For example, if I am mildly angry or hurt and I have told you that I am, then that information about me is shared.

The blind area refers to things I do not know about myself but which others can see in me. For example, I may not be aware that I have cut in on someone, while all the others in the conversation are aware of this. I may not know that I have great skill in summarizing points in a meeting unless others let me know.

The avoided area represents things I know about myself but I do not reveal them to others. For example, I may be hurt and able to disguise my feelings so that others do not know. My reactions to other's behavior is generally unknown unless I choose to disclose those reactions.

The unknown area refers to things neither I nor others know about myself. It is important only in the sense that we know through experience that it exists. For example, people often have insights about behaviors which were influencing relationships all along.

In many relationships the shared area is very small. Persons often make inferences and believe they know much about another, but many of these inferences are inaccurate. Most important, the shared area is often filled with the less important details of the relationship while the blind and avoided areas contain the essential elements.

One strategy which two persons can employ, then, is to try to make the shared area as large as possible. This can occur by receiving feedback from the other which will reduce the blind area and increase the shared area, and by making disclosures or by giving feedback to the other which will decrease the avoided area and increase the shared area. However, the method of giving and receiving feedback and of making disclosures will often influence the impact, whether the information is received defensively and rejected, or whether it is received openly and accepted. For this reason, we will explore the relationship of the communication deck to giving/receiving feedback and then explore other considerations.

1. Giving Feedback: Feedback is more helpful if it is . . .

   Descriptive rather than general. "You bumped my cup" rather than "You never watch where you are going." (D card)

   Checking out rather than absolute. "You seem unconcerned about Jimmy" rather than "You don't give a damn about Jimmy." (P card)

   Accompanied by Awarenesses. "I like what you just said" or "I am nervous about telling you this." (A card)

Informing rather than ordering. "I would like to continue" rather than "Stop interrupting me." (A card)

Example: "Mary, I am disturbed by something you do in the group. (A card) On several occasions over the last half-hour you changed the subject or interrupted someone. (D card) For example, when Joan was talking about her boss, you broke in before she had finished and began discussing your vacation. (D card) This all makes me think you are unconcerned about working on this problem. Is that true?" (P card)
rather than
"Mary, I wish you would quit interrupting."

Example: "Mary, I would like to tell you something you do in the group which pleases and helps me. (A card) You have summarized what we have been doing several times and it has helped us get back on the track." (D card)
rather than
"Mary, I like having you in the group."

Receiving Feedback: Most people leave the person giving feedback unfinished by failing to respond or by making a minimal response as to the impact of the feedback. Since feedback is such a sensitive area of human interaction, a minimal response is likely to discourage further feedback being given. The alternative to giving a minimal response is paraphrase (L card), to let the other person know you are actively interested in the feedback and to insure that you have a clear understanding of the meaning. It is also helpful to disclose the impact of the feedback. (A card)

Example: "Do you mean that I never listen to anyone?" (L card)
"If so, I am upset to hear that." (A card)
"Yet, I am thinking that it is best for me to find out now." (T card)

"You mean that the group needs those kinds of inputs and I am the only one making them?" (L card)
"I feel pleased about that." (A card)

2. Completeness: As pointed out above, giving feedback or making disclosures are risky actions. Thus, it is important not to leave the person who has given the feedback or made the disclosure unfinished by failing to respond or by making a minimal response. A summary of a complete transaction is as follows:

i) Feedback:

Person A		Person B
sends descriptive feedback (D) states awareness related to feedback (A)	⟺	paraphrases (L) states awareness of impact (A)

ii) Disclosure:

Person A		Person B
discloses a hidden or avoided area (A)	⟺	paraphrases (L) states awareness of impact (A)

3. Contracting: Because feedback is likely to be threatening to both parties, the sender and the receiver, it is best done if both parties have agreed to giving and receiving feedback. A person can tell another when feedback would be useful and when it would not. As an example, most persons would not want feedback about their cooking just after learning that they did not receive the promotion they expected. Thus, an offer to give feedback or to receive it usually precedes most productive feedback sessions. Imposed feedback is generally ineffective and resented.

   Example: "Alice, there have been a few things troubling me in our relationship of late. Would you be willing to talk about them?"

   "Mary, I would like to know how others see me when I am a member of a decision-making team. Would you be willing to give me feedback?"

   The person offering the contract should be prepared to accept a "no" or a statement like "not now, but I would like to later."

4. Intentionality: Openness must stem from a desire to improve your relationship with the other. If your intention is to hurt the other person and to sever or minimize the relationship, then no style is likely to make the other party receive the feedback or disclosure in an accepting way.

   The aim must be at creating a shared understanding of the relationship. You wish to know how the other perceives and feels about your actions. You wish the other to know how you perceive and feel about his actions. Each of you thus will view the relationship from more nearly the same viewpoint.

5. Coercion: Although the discussion may become intense, spirited, angry, or tearful, it should be noncoercive and not an attempt to get the other person to change. Each should use the information as he sees fit. The attitude should not be "Who is right and who is wrong?" but "What can each of us learn from this discussion that will make our working together more productive and more satisfying?"

   As a result of the discussion, one, both, or neither of you may act differently in the future. Each, however, will act with fuller awareness of the effect of his actions on the other as well as with more understanding of the other's intentions. Any change, thus, will be self-chosen rather than to placate or submit to the other.

As an example, suppose I say to Jim, "I get frightened when you go away." There are several change possibilities. Jim can stop going away. I can try to understand and accept my fear. Neither of us can change. We can try to find other solutions besides Jim not going away or me trying to live with my fear. As examples, I can visit someone else or I can go with Jim.

6. Timing: Reactions should be shared as close to the behavior that aroused them as possible so that the other will know exactly what behavior is being discussed. For example, behavior during the conversation itself can be commented on. For example, "What you just said is the kind of remark that makes me feel pushed away." A common practice is to save up massive accumulations or hurt feelings and annoyance and to dump a "museum" list on the other person all at one time. When this happens, it is difficult even with paraphrasing for the other person to understand which specific behaviors of his have led to the present confrontation.

SUMMARY TABLE

If what I am doing is:	The long run relationship is likely to be characterized as:
Giving feedback and disclosing in A, D, L, P styles	Positive
Completing transactions	Collaborative
Contracting	Equal
Intentionality to improve relationship	High understanding
Non-coercive	Trusting
Timing close to immediate	(Exciting and risky)
Giving feedback via B, T, or Withholding, or Maintaining small shared area	Negative
Incomplete transaction	Competitive
Non-contracted	One up/one down
Punitive intention	Low understanding
Coercive	Mistrusting
Museum listing	

APPENDIX D30

THE FEEDBACK EXCHANGE

The feedback exchange has four phases: Contracting, Clarifying, Problem-Solving, and Closure. These phases are described sequentially below in terms of what the sender and receiver does during each.

1. Contracting

The sender asks the other person whether he would be willing to explore an issue with him. A genuine contract offer allows for the possibility of a "no" response. Otherwise, the sender should make a demand.

e.g., "I'm concerned about something that happened yesterday. Would you be willing to discuss it with me?"

The receiver accepts, rejects, or asks for a rain check. An indefinite "no" is problematic, however, in that it leaves the sender hanging.

e.g., "Not now, but how about tomorrow morning, first thing?"

2. Clarifying

The sender provides descriptive observations (not inferential statements) about the event which has triggered the issue.

He states the impact of the issue on his feelings.

He states the tangible impact of the issue on him.

The receiver limits his initial comments to Active Listening Skills.

He states the impact of the feedback on him.

3. Problem-Solving

If both parties agree that there is a problem of mutual concern, they may choose to engage in collaborative problem-solving. This means that neither party tries to force his idea for a solution on the other and that there is a period during which both parties actively explore solution possibilities in a search for a mutually satisfying solution. Even if a "perfect" solution cannot be found, each party must be satisfied that he has been understood and that there has been some energy honestly devoted by both parties to finding a better solution.

Parties can ease some of the dilemma of problem-solving by adopting trial solutions which are re-evaluated in terms of results after a reasonable period of time.

4. Closure

Both parties discuss their feelings at the close of the problem-solving and discuss whether they have "finished" the major concerns of each.

APPENDIX D31

EXERCISE IN GIVING FEEDBACK

This exercise is designed to give you a practical and real demonstration experience in giving feedback in a constructive way.

The leader will receive feedback from course participants who are to follow the procedure outlined on the handout entitled "constructive openness."

You are to work in groups following these steps:

1. Each reads handout "constructive openness."

2. Each individual discusses situations which have occurred in this seminar which could be used for giving feedback. The situation chosen should be real and important to the individual.

3. The group should choose the individual who is willing and who has an interesting situation about which to give feedback.

4. Individual role plays giving feedback using one person in the group to play the seminar leader and the others to give feedback.

5. The individual giving feedback describes only his own situation. He is not to give feedback from the group as a unit.

6. The group should avoid supporting or not-supporting the individual chosen. The group's purposes are two: (1) to help the individual clarify the situation (through active listening L, PC), and (2) to help the individual to use the styles employed in the handout (through role play and feedback(D).

APPENDIX D32

CONSTRUCTIVE FEEDBACK SCORING SHEET

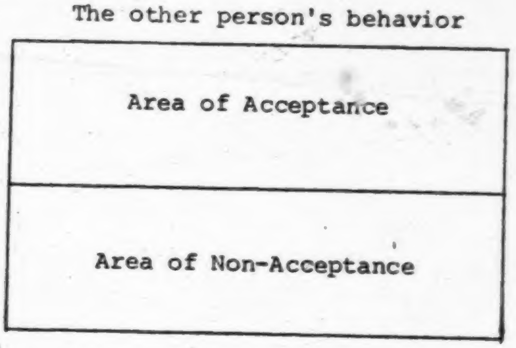
Instructions: In the rows below, place a mark (|) whenever the person sends a message in one of the following categories. Score the sender and the receiver separately.

SENDER			*RECEIVER*		
Category	Make a mark (|)	Total	Category	Make a mark (|)	Total
Descriptive Observation			Descriptive Observation		
Thought			Thought		
Direct Feeling			Direct Feeling		
Paraphrase			Paraphrase		
Perception Check			Perception Check		
Block			Block		
Social			Social		

APPENDIX D33

ACCEPTANCE, UNACCEPTANCE, AND CHANGE

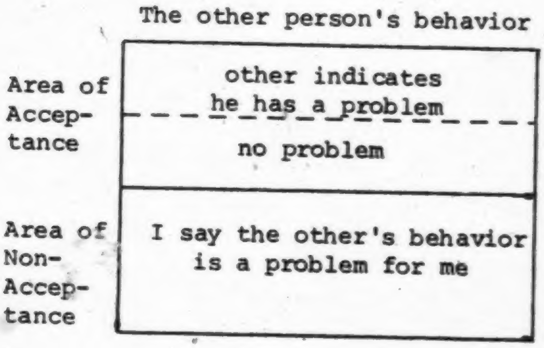
1. This diagram represents the other person's behavior


The other person's behavior
Area of Acceptance
Area of Non-Acceptance

This portion represents what I accept about the other

This portion represents what I don't accept about the other

2. The area of acceptance can be further divided into two parts: (1) the other person may define some of his behavior as problems for himself, and (2) may be no problem.


The other person's behavior
Area of Acceptance
other indicates he has a problem
no problem
Area of Non-Acceptance
I say the other's behavior is a problem for me

he says, "I have a problem."
he says, "I'm angry and upset."
he is quiet, sulks, pouts.
he is nervous.
he kicks the table.
he walks faster.
he expresses negative feelings.
he avoids others.
he cries.
he swears.

I don't like it when . . .
I don't accept . . .
I don't feel good when . . .
I feel threatened by . . .
I don't feel like letting him be himself.
I'm upset, afraid, angry, disappointed with him.

3. Skills to use when the other person has a problem which is in an area which you accept: P, PC, F, DO NOT BLOCK

4. Skills to use when you want to modify the other's behavior which is unacceptable to you.

   A.

Send "I messages"	Rather than "you messages"
Observations	Blocks
Feelings	e.g., "You did this to me."
Tangible effects on me	Threats
Changes I want	e.g., "You'd better stop that."

   B. Modify self--learn that the tangible effects on me are not so great.

   C. Modify the environment

   D. Conflict resolution:

      i. I win/he loses: AUTHORITARIAN
      ii. He wins/I lose: PERMISSIVE
      iii. Problem-solving:
         a. contract
         b. feedback
         c. agreement that there is a problem
         d. solution search
         e. acceptance of the best solution
         f. trial solution
         g. evaluations and final solution

   E. If the other doesn't agree that there is a problem or doesn't agree to problem-solving:
      - model desired behavior
      - try to influence one time, no more
      - modify self
      - grin and bear it; there's nothing else you can do unless you have lots of power

APPENDIX E

APPENDIX E

THE UNIVERSITY OF ALBERTA, FACULTY OF BUSINESS ADMINISTRATION AND COMMERCE, ORGANIZATION THEORY 303, COURSE OVERVIEW

This course is designed as a practical experience in Team Building. Team Building consists of a set of learning activities through which members of management teams are assisted in increasing their productivity.

The course is described as a practical experience because students will work in five-man teams in a "real world" environment. The five-man teams will be responsible to complete a series of decision-tasks and one term paper. Team productivity will be measured and marks will be allotted according the team's competitive position. Whenever the teams are not involved in decision-tasks they will be exposed to team building learning activities much like those which are presently carried out in government and industry.

The team building activities focus on interpersonal communications, group problem-solving and decision-making, leadership, and on the functioning of small groups.

Workload

Much of the work in this course will take place during the class hours. For this reason, students will be expected to occasionally spend an additional time block of 1½ hours either in team meetings or in team building learning activities.

During registration students were requested to block out a common 1½ hour time period during which these additional activities are to take place. This was done at the suggestion of students previously enrolled in the course.

While the class work load is higher, the outside work requirements are substantially lower in this course. For example, teams in another section of O.T. 303 will write three term papers as compared to one in this section.

Marking

Each student's course mark will be based on a series of decision-tasks done in teams, on one term paper done in a team, and on an optional paper. Each of these will be discussed in turn.

1. Decision-tasks.

There will be 10 decision-tasks which will account for 67% of the course mark. These tasks will be performed by five-man teams. They will be spaced throughout the term.

Tasks occurring at the end of the term will be weighted more heavily than those occurring at the beginning of the term. This is because there will likely be more confusion about what is wanted at the start of the term and because there will be few team building learning activities before the first several tasks.

Each team will be responsible for dividing the marks earned from the tasks among its members. An equal division will not be required. A report on the mark distribution will be required within one week of the allocation of marks. This distribution will be irreversible and marks will accumulate for each member of each team from week to week. In order to protect minority members from exploitation, all members of the team will be required to sign the report before it will be accepted. Reports submitted beyond the one week deadline will be penalized 10% per member per day late.

The following table indicates the maximum points possible for each of the ten decision-tasks. Note that the weighting increases over time.

Mark Allocations For 10 Problem Solving Tasks

	Approximate Date: Week of	*Maximum Team Points Possible*
Task 1	Sept. 17	100
Task 2	Sept. 24	150
Task 3	To be announced	200
Task 4	To be announced	250
Task 5	To be announced	300
Task 6	Nov. 19	400
Task 7	Nov. 26	400
Task 8	Nov. 26	400
Task 9	Dec. 3	400
Task 10	Dec. 3	400

Total Team Points Possible= 3000

Each team will be responsible for allocating earned team points among team members under the following rule: No individual's allocation may vary from the average of all team members marks by more than 50% rounded off to the highest figure. For example, if a five-man team earns 200 points, the average of all team members marks is 200 divided by 5 or 40 points. Thus no individual may receive more than 60 nor less than 20 points. The following table indicates the possible point totals for individuals over the ten decision-tasks assuming that the team in consideration earns a maximum score each time.

Task	*Team Points*	*Minimum Possible*	*Average*	*Maximum Possible*
1	100	10	20	30
2	150	20	30	50
3	200	20	40	60
4	250	30	50	80
5	300	30	60	90
6	400	40	80	120
7	400	40	80	120
8	400	40	80	120
9	400	40	80	120
10	400	40	80	120
		310	600	910

2. Team paper

Each team will be responsible for one major paper worth 33% of the course mark. There will be several subjects to choose from including interpersonal communications, leadership, small group functioning, and methods of team building. Information on these subjects will be made available during the third week of the course.

This paper will be due on December 6, 1973 at 4:30 p.m. It can be placed in my mailbox in 434 CAB or placed under my office door. There will be a penalty of 10% of the total points awarded per member per day late.

3. Summary of team marks possible

10 decision-tasks	3000 points
1 paper	1500 points

4. Individual paper

Individuals may also opt to do an individual paper on the subjects mentioned above but the subject chosen must differ from that chosen by the individual's team.

Because an individual project is not required of all students, it can be looked upon as a method of improving the student's stanine mark without forcing the grade curve for other students down (in other words, the overall grade curve will rise by the amount of extra papers completed; students who do not do an optional paper will not go down).

Persons writing an optional paper will not automatically increase their stanine. In the past, 50% of the students have failed to improve their marks. The following mark allocations will be made:

Quality of Paper	*Stanine Increase*
Excellent	2
Good	1
Poor to Fair	0

These projects will be due by 4:30 p.m. on December 10, 1973. Any project handed in later than that date will not be accepted.

5. Overall course points and stanine equivalents

Total Individual Points Earned	*Stanine*
800-900	9
700-790	8
600-690	7
500-590	6
400-490	5
300-390	4
200-290	3
100-190	2
0-90	1

6. A bi-monthly report will be distributed showing the distribution of points to that date. Each student will thus be able to tell where he stands competitively.

Placement in Teams

Students will be placed in teams on a random basis. This is to insure that all students have an equal chance and so that none have to compete against friendship groups which might have an advantage.

All teams can expect to experience difficulties just as most management teams in government and industry are plagued with difficulties. The object of this course is to assist teams experiencing difficulties in finding ways to become more effective.

Research

Some information will be collected to determine whether the teams in this course are in fact more productive than student teams which have not been exposed to team building.

However, the vast majority of the information collected in this course will be solely for the use of the students enrolled in the course. You will learn to collect information about your team and utilize that information to improve your team's performance.

No information will be collected on individual students. Each student may be secure in the fact that his personal privacy will not be invaded.

All details of the research study will be reported on the final day of class. This information should be of interest to students in the course as it will reveal the utility of the learning during the course.

APPENDIX F

PAGE

APPENDIX F 1 Pretest Task #1 211

APPENDIX F 2 Materials for Pretest Task #1 213

APPENDIX F 3 Pretest Task #2 214

APPENDIX F 4 Pretest Task #2 Outcomes 219

APPENDIX F 5 Pretest Task #3 221

APPENDIX F 6 Correct Answers to Pretest Task #3 225

APPENDIX F 7 Pretest Team Survey 227

APPENDIX F 8 Instructions to SFB Teams re Completion of Pretest Team Survey 230

APPENDIX F 9 Instructions to SFB Teams re Discussion of Pretest Task #3 231

APPENDIX F 10 Instructions to UFB Teams re Discussion of Pretest Task #3 233

APPENDIX F 11 Instructions to NFB Teams for Class Period Following Pretest Task #3 234

APPENDIX F 12 Training Task #1 Instructions 235

APPENDIX F 13 Training Task #1 Activity Flow Sheet 237

APPENDIX F 14 Important Roles for Team Effectiveness 238

APPENDIX F 15 Process Observation Procedure 243

APPENDIX F 16 Team Totals 245

APPENDIX F 17 Training Task #1, The "Parasol" Assembly Problem 246

APPENDIX F 18 Scoring Procedure for "Parasol" Problem 248

APPENDIX F 19 SFB Team Survey for Training Task #1 251

			PAGE
APPENDIX	F 20	SFB Team Directions for Discussion of Training Task #1	254
APPENDIX	F 21	UFB Team Directions for Discussion of Training Task #1	256
APPENDIX	F 22	NFB Team Instructions for Class Period Following Training Task #1	257
APPENDIX	F 23	Handout on Individual or Group Problem Solving	258
APPENDIX	F 24	Training Task #2 A	261
APPENDIX	F 25	Correct Answers to Training Task #2 A	266
APPENDIX	F 26	Training Task #2 B	267
APPENDIX	F 27	Correct Answers to Training Task #2 B	270
APPENDIX	F 28	SFB Team Survey at Completion of Training Task #2	271
APPENDIX	F 29	UFB Team Directions at the Completion of Training Task #2	274
APPENDIX	F 30	NFB Team Directions at the Completion of Training Task #2	275
APPENDIX	F 31	SFB Team Instructions for Discussing Training Task #2	276
APPENDIX	F 32	UFB Team Instructions for Discussing Training Task #2	280
APPENDIX	F 33	NFB Team Instructions for Class Period Following Training Task #2	281
APPENDIX	F 34	Training Task #3	282
APPENDIX	F 35	Scoring of Training Task #3	284

PAGE

APPENDIX F 36 SFB Team Instructions for Class Period Following Training Task #3 286

APPENDIX F 37 UFB Team Instructions for Class Period Following Training Task #3 288

APPENDIX F 38 NFB Team Instructions for Class Period Following Training Task #3 289

APPENDIX F 39 Post-Test Task #1 290

APPENDIX F 40 Correct Answers to Post-Test Task #1 295

APPENDIX F 41 Calculation of Team Productivity vis à vis Productivity of Most Accurate Member 296

APPENDIX F 42 Post-Test Task #2 297

APPENDIX F 43 Diagram of Lego Man 299

APPENDIX F 44 Diagram of Lego Figure 301

APPENDIX F 45 Lego Man Scoring System Used in Analysis Comparing Experimental and Comparison Teams 303

APPENDIX F 46 Post-Test Task #3 304

APPENDIX F 47 Correct Answers to Post-Test Task #3 306

APPENDIX F 48 Post-Test Task #4 307

APPENDIX F1

PRETEST TASK #1

Goal: Build the highest structure possible.

Materials: Each team will receive an identical set of tinker-toys bound in a plastic bag.

General Procedure: There will be an initial period of 30 minutes for planning and a second period of 35 seconds for building.

Rules:

1. The tinker-toy bag may not be opened until instruction is given by the instructor to do so.

2. The structure must stand by itself at the end of the 35 second building period. Teams will be given notice by the instructor who will count 5, 4, 3, 2, 1, Finish, at the end of the 35 second period. No contact, human or material (besides the floor), may be in contact with the structure at that time.

3. The structure must be built from the floor.

4. Height from the floor will be measured with a tape measure. A vertical measure, perpendicular to the floor, will be used.

5. Only the material handed out by the instructor may be utilized in the structure.

6. No more than two tinker-toy pieces may be assembled by a team at any one time during the 30 minute planning period. This rule allows each person in the team to get a feel for the assembly of the tinker-toys.

7. If a team finishes planning before the end of the 30 minute planning period, it may either remain in its planning area or leave the room. To leave the room, it must obtain the permission of the instructor. Signal by raising hands.

8. Team members must always face inward toward the center of the team's planning area. Team members may not look towards the planning areas of other teams.

9. Each team must, at the end of the planning period, submit a sketch of its structural design.

10. The instructor will signal five minutes before the end of the planning period. Teams which have left the room must make arrangements to hear this signal. Between this time and the end of the planning period teams must replace all materials in the plastic bags, seal it, and place it at the center of the planning area.

11. The instructor will signal the end of the planning session. At that time there will be no talking allowed.

12. The 35 second building period will shortly follow the planning period. The instructor will signal the start by counting 5, 4, 3, 2, 1, Start.

13. Between the end of the planning period and the start of the building period, teams must not touch the tinker-toy materials.

14. Five seconds before the end of the building period, the instructor will count 5, 4, 3, 2, 1, Finish. At the word "finish," the no support rule (number 2 above) will be in force.

15. At the end of the building period students may move about, but may not touch their own or any other structure. The instructor will measure structures as quickly as possible.

16. Ten per cent of points earned will be deducted from the team's total for each violation of these rules. If the team is likely to earn no points, a penalty of -2 points will be incurred for each violation.

APPENDIX F2

MATERIALS FOR PRETEST TASK #1

A plastic bag containing the following materials was provided to each team for pretest task #1:

Tinker Toy Materials

17 x 1¼" rods
12 x 2" rods
12 x 3¼" rods
12 x 5" rods
11 x 7" rods
1 x 11" rods
4 wooden wheels--1 5/8" in diameter
3 wooden discs (part W)
7 plastic rod holders (part LS)
18 wooden discs (part BG)
2 plastic discs (part ZP)
1 plastic rod cap
1 plastic windmill wafer

Other Materials

1 styrofoam cup
1 piece of string 28" long
1 plastic coffee stirring stick
1 large paper clip
2 small paper clips
1 large rubber band
4 small rubber bands
1 rubber roller 1¼" long, 3/8" in diameter

APPENDIX F3

PRETEST TASK #2[1]

1. Your team is to imagine that it operates a corporate farm. As a team you will be asked to decide how to operate your farm for a three-year period--1880, 1881, and 1882. The details about your farm and the decisions which your team is to make are described below.

   The goal is to make as much profit as possible from your farm during the three-year period.

2. After you have made your decision for the year 1880, make an extra copy of your 1880 decision sheet and take it to the front desk. You will then be given an 1880 outcome sheet. Using this sheet, calculate your profit or loss and proceed to make decisions for 1881 using your net financial position from 1880 as your beginning capital for 1881.

3. REPEAT STEP #2 above before proceeding with your decisions for 1882.

4. All farm decision material including outcome calculations for all three years should be put in your team's envelope and placed upon the front desk by the time written on the blackboard.[2]

5. There will be a three point penalty for each error in outcome calculations.

6. At the end of the task, all materials must be returned to the envelope. Three points penalty for each missing item.

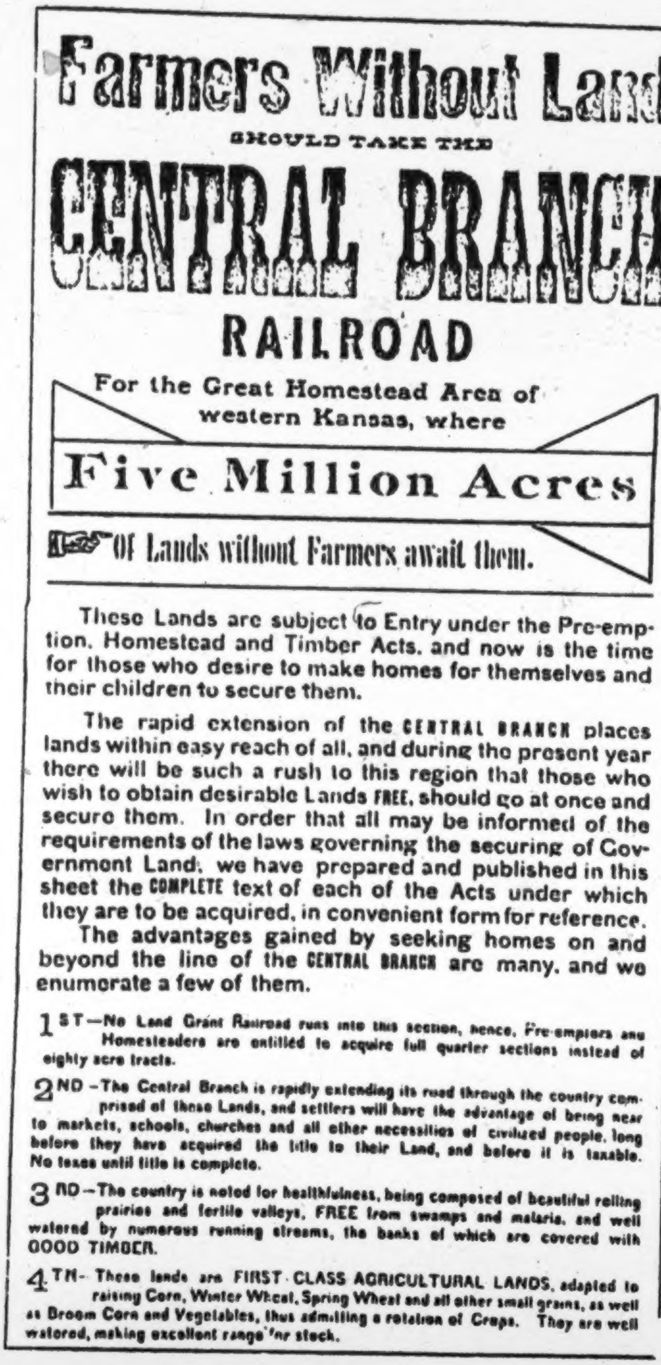
---

[1] This task was adapted from The Game of Farming (MacMillan Co., 1967).

[2] Teams were given 80 minutes to complete the task.

You have decided to settle in the western U.S. and take up farming.

While travelling west, you picked up a railroad leaflet telling about Western Kansas. This is all you know about the area in which you have settled.



Farmers Without Land

SHOULD TAKE THE

CENTRAL BRANCH

RAILROAD

For the Great Homestead Area of
western Kansas, where

Five Million Acres

☞ Of Lands without Farmers await them.

These Lands are subject to Entry under the Pre-emption, Homestead and Timber Acts, and now is the time for those who desire to make homes for themselves and their children to secure them.

The rapid extension of the CENTRAL BRANCH places lands within easy reach of all, and during the present year there will be such a rush to this region that those who wish to obtain desirable Lands FREE, should go at once and secure them. In order that all may be informed of the requirements of the laws governing the securing of Government Land, we have prepared and published in this sheet the COMPLETE text of each of the Acts under which they are to be acquired, in convenient form for reference.

The advantages gained by seeking homes on and beyond the line of the CENTRAL BRANCH are many, and we enumerate a few of them.

1ST—No Land Grant Railroad runs into this section, hence, Pre-emptors and Homesteaders are entitled to acquire full quarter sections instead of eighty acre tracts.

2ND—The Central Branch is rapidly extending its road through the country comprised of these Lands, and settlers will have the advantage of being near to markets, schools, churches and all other necessities of civilized people, long before they have acquired the title to their Land, and before it is taxable. No taxes until title is complete.

3RD—The country is noted for healthfulness, being composed of beautiful rolling prairies and fertile valleys, FREE from swamps and malaria, and well watered by numerous running streams, the banks of which are covered with GOOD TIMBER.

4TH—These lands are FIRST CLASS AGRICULTURAL LANDS, adapted to raising Corn, Winter Wheat, Spring Wheat and all other small grains, as well as Broom Corn and Vegetables, thus admitting a rotation of Crops. They are well watered, making excellent range for stock.

The first step is to plan how you will allocate your money. In addition to the farm equipment, you have $1,500 to start your farm but, for the purposes of the game, you budget $500 of it for the cost of living during the first year. This cost-of-living expense must be set aside each year. You can spend money in $100 units only. The smallest unit of land you can work with is 40 acres.

The crops you can plant include wheat, oats, barley, rye, and corn. It costs $100 to raise 40 acres of wheat, oats, barley, or rye, but it costs $200 to raise 40 acres of corn.

You may invest in beef cattle, dairy cattle, sheep, and hogs. If you decide to start a dairy herd, there is an additional expense of $200 the first year that is not repeated the following years. On any 40-acre tract you may graze from $100 to $400 worth of sheep, beef cattle, or dairy cattle. You may mix your investment in sheep, beef cattle, or dairy cattle on a 40-acre tract, but only in terms of $100 units, such as $100 in sheep and $300 in beef cattle. Hogs do not require special land but may forage on crop or pasture land. You may invest from $100 to $600 in hogs.

Additional land may be rented for $100 per 40-acre unit. If you do not choose to farm all your land, you may rent out some of it to other farmers for $100 per 40-acre unit. The game assumes you can always find someone whose land you can rent or to whom you can rent some of yours. You need not try to rent from or to other students.

All costs such as taxes, seed, labor, supplies, and maintenance are included in the charges for each of the farming activities.

The Game Begins

Now look at the activity sheet for 1880. Fill in the blank for the year (1880), and the total amount of money you have ($1,500) in the blank next to "Capital." At the left is a list of all the crops and animals you may raise. The list continues with other expenses, including cost of living as well as a space for savings. Savings earn no interest.

The first column is titled "Allocation" and it is the only column you will fill in as you plan your farming activities. There is a sketch of your 160-acre farm on the right. The costs for crops, livestock, and rent are also all listed on the activity sheet. As you decide how to use each 40-acre square, write the decision or its abbreviation on the map, figure the expense, and write that amount in the proper blank in the "Allocation" column. For example, if you want to plant wheat in one 40-acre area, write wheat in one square and put $100 in the blank next to wheat in the "Allocation" column. If you want to rent some land, there is another sketch representing land you may rent.

The total you may spend is the figure you have recorded as capital at the top of the sheet. Continue your allocations until you have utilized all your land or capital.

If, after you have made your allocations, you still have cash on hand but no land available, you may invest it in hogs, place it in savings, or rent more land.

Scoring

Once you have made your allocations, you are ready to find out how successful your first year's farming operation has been. You will receive an outcome card. On it is a list of crops and livestock with a number printed after each entry. This number is the multiplier. If you planted 40 acres of corn and the outcome card has a 2 after corn, record the 2 in the "Multiplier" column on the activity sheet. Then use this number to multiply the amount recorded in the "Allocation" column to figure the "Outcome."

	Allocation	*Multiplier*	*Outcome*
CORN	$200	2	$400

This operation should be repeated for each of the crops or animals you have chosen to raise.

Notice that cost of living and rent are multiplied by 0, and savings by 1.

After you have figured each individual outcome and placed the amount in the "Outcome" column, total this column. The difference between this total and $1,500 is your net profit or loss for the year. Be sure to record the total of the "Outcome" column as the capital you have to work with on the 1881 activity sheet.

Be sure to read the introductory paragraph on your outcome card to find out why some of your investments failed and others were successful.

1880-1882 ACTIVITY SHEET

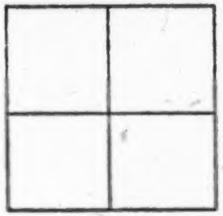
Name or Number ____________

Group ____________

Year ____ Capital ____

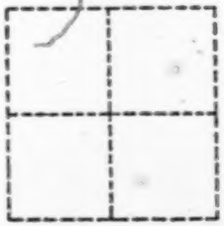
	Allocation	Multiplier	Outcome
Wheat	$____	____	$____
Oats	$____	____	$____
Barley	$____	____	$____
Rye	$____	____	$____
Corn	$____	____	$____
Dairy cattle	$____	____	$____
Beef cattle	$____	____	$____
Sheep	$____	____	$____
Hogs	$____	____	$____
Cost of living	$ 500	0	$ 0
Rent	$____	0	$ 0
Initial investment for dairying[1]	$____	0	$ 0
Savings	$____	1	$____
Total	$____		$____

Your Farm



Each small square represents 40 acres.

Rented Land



Costs per 40-Acre Unit	
Crop	
Wheat	$100
Oats	100
Barley	100
Rye	100
Corn	200
Livestock	
Dairy cattle (maximum per 40 acres)[1, 2]	400
Beef cattle (maximum per 40 acres)[2]	400
Sheep (maximum per 40 acres)[2]	400
Hogs (maximum per farm)[3]	600
Rent	100

[1] There is an extra expense of $200 for the first year with dairy cattle.

[2] Dairy cattle, beef cattle, and sheep investments are in $100 units with a $400 maximum investment per 40-acre unit. Livestock may be mixed in units of $100 on any 40 acres.

[3] Hogs are a straight cash investment in $100 units with a $600 maximum investment and they do not need allocated land.

APPENDIX F4

PRETEST TASK #2 OUTCOMES

Outcomes 1880

Most areas receive ample rainfall, but some parts of the county have a dry spring while others are missed by needed summer thunderstorms. Crop diseases and insects inflict serious damage only on a small part of the county. Both crop and livestock prices are good. Wheat, barley, and pasture do very well because of adequate rains, rust hurts oats badly, and corn is hurt by August hail.

Returns on your investment were as follows:

	MULTIPLIER
Wheat	5
Oats	1
Barley	4
Rye	4
Corn	1
Dairy cattle	2
Beef cattle	2
Sheep	2
Hogs	2

Outcomes 1881

There is abundant summer rainfall throughout most of the county. Wheat yields are generally good but prices are lower for all grain. Most areas of the county are highly infested with corn borers. Cattle and sheep prices are high. In your neighborhood wheat yields are good; corn yields are hurt by borers; pastures are excellent.

Returns on your investment were as follows:

	MULTIPLIER
Wheat	2
Oats	0
Barley	1.5
Rye	2
Corn	0
Dairy cattle	1
Beef cattle	1.5
Sheep	1.5
Hogs	3

Outcomes 1882

Most areas in the county experience lowest rainfall yet recorded. Cattle prices fall in July because dry pasture conditions force a market rush. However, some more fortunate areas are able to hold longer and capitalize on a normal market run at high prices. Low yields force prices up so farmers able to salvage some of their crops are not severely hurt. Winter sown crops are not severely damaged by the drought. Your neighborhood experiences drought and corn is nearly a total loss. Part of the wheat and barley crops are salvaged. Pastures, though damaged, sustain cattle through the period of low market prices.

Returns on your investment were as follows:

	MULTIPLIER
Wheat	2
Oats	1
Barley	2
Rye	1.5
Corn	0
Beef cattle	1.5
Dairy cattle	1.5
Sheep	1
Hogs	1

APPENDIX F5

PRETEST TASK #3

General Instructions

You are now beginning a 25 minute period during which you are to work as an individual in silence. Over the next 25 minutes first read these instructions carefully and then proceed with the first part of the task.

Overall Task Objectives

You are to choose the most appropriate answers for the communications task which is on a separate sheet.

You have 25 minutes to read these instructions and to work on this task as an individual.

Then, your team will have 45 minutes to work on this task together.

Only the answers given by the team as a whole will count toward the team mark.

However, each individual is responsible to complete and sign an individual answer sheet which must be turned in.

The team answer sheet will not be passed out until the 25 minutes are up.

Following the completion of the team task, teams will turn in their team answer sheet and receive further instructions which they must follow before this task is complete.

DO NOT ASSUME YOU ARE FINISHED WHEN YOU TURN IN YOUR TEAM ANSWER SHEET.

Rules During this 25 Minute Period for Individual Work

1. There is to be no talking during this period.
2. Each individual on the team is to take two copies of the communications task.

3. No course materials or notes or blank scratch paper may be on the work surface or within view. Only the task materials themselves may be on the work surface.

4. Each individual is to complete one copy of the communication task by the end of this 25 minute period and place it in the envelope marked INDIVIDUAL ANSWERS. Note that individuals may answer with a "?," but each item must be responded to. However, there will be no individual or team marks based on these answer sheets.

5. When all individuals have completed the individual communications task--as indicated by them each placing one copy fully completed in the envelope marked INDIVIDUAL DECISIONS--one team member may then bring the envelope forward and pick up the envelope marked TEAM DECISION which contains the team decision communication task. (It is the same task, but to be done as a group.)

6. Teams may not turn in their individual decision or pick up the team decision sheet until the 25 minutes are up.

Rules for the 45 Minute Period for Team Decision Making

1. Talking is permitted.

2. Same rules as above for materials on the desk or within view.

3. By the end of the 45 minute period, each team is to write in answers on the sheet marked TEAM ANSWERS.

4. Correct answers will receive a score of "+1." Wrong guesses will receive a score of "-1." The score for no answer will be a "0."

5. All materials--the instructions, all copies of the individual task sheets, and the team decision sheets--are to be placed in the envelope marked INDIVIDUAL DECISIONS.

6. This envelope can be turned in before the 45 minutes are up.

When these materials are turned in at the desk, the team will receive an envelope marked FURTHER INSTRUCTIONS, the contents of which must be completed before the team leaves the class.

There will be a penalty for each violation of these rules.

[illegible] ON THE INDIVIDUAL ANSWER SHEETS.

Communication Task

A person named "Mike" is witnessing a scene involving Ron, Sarah, and Martin. The sentences below are the feelings, thoughts, and observations which Mike has about this scene. Whenever Mike's statement represents an observation or description, place an O in the blank; when it represents a description of Mike's feelings, place an F in the blank; and when it represents a thought, place a T in the blank.

_____ 1. Ron and Sarah were sitting in the dining room.

_____ 2. Martin was pacing nervously outside.

_____ 3. Sarah said that Martin was inconsiderate and that she was trying to break off from him.

_____ 4. You could see by the way they were holding hands that Ron and Sarah had strong feelings for each other.

_____ 5. Suddenly, Martin came into the room and began shouting.

_____ 6. You could hear the anger in his voice.

_____ 7. The situation was tense for everyone.

_____ 8. I was glad that I wasn't in the room.

_____ 9. I felt their tenseness and anger.

_____ 10. People should be very careful in issues of love and jealousy.

Jim has just completed the communication task. He is sitting in his work team. Shaking his head from side to side, he says "This kind of thing ought to be outlawed." Below are the responses to this statement made by members of his team. If the response is a paraphrase, write in a P in the blank; if it is a perception check, write in a PC; if it is a word swap, write in a WS; and if it is anything else, leave the space blank.

_____ 11. Do you mean that it shouldn't be allowed?

_____ 12. I am interested in understanding your meaning. Would you please elaborate on what you said?

_____ 13. Don't you think that it's the same everywhere?

_____ 14. I imagine that you're upset. Is that true?

_____ 15. Do you mean that testing people on communications when they thought that they might be doing a tinker-toy task is unfair?

_____ 16. Are you saying that we should raise a complaint with the Dean?

_____ 17. Do you want to tell me more about it?

_____ 18. You are shaking your head. What feeling are you conveying by that?

Charlie Brown and Linus are having a conversation about going to the mountains. Score each of Charlie's responses to Linus as Bl for blaming, Pl for placating, Ir for irrelevant, Ra for rational, and AL for active listening. Score only the items with underlines spaces (___) preceding the sentence.

Charlie: "Wouldn't it be fun to go on a camping trip?"
Linus: "And get bitten by a queen snake, not on your life!"
_____ 19. Charlie: "Most snakes are not dangerous. Even those that are are rarely fatal, and no one has been bitten in the area where we are going for twenty years. And the queen snake avoids humans and is not venomous."
Linus: "Bull. Those queen snakes crawl right into your tent and chomp you. The woods are full of them this time of year!"
_____ 20. Charlie: "Once you get there, you'll stop worrying about snakes."
Linus: "Those queen snakes don't care what they do to you. Stay out of the woods, that's my motto."
_____ 21. Charlie: "You're always afraid of something. That's why we never get to go outdoors."
Linus: "No telling how many people have been chomped already this year. I'm not going to be one of them."
_____ 22. Charlie: "You think it's best to stay in the city then. Is that right?"
Linus: "In the middle of the sidewalk!"
_____ 23. Charlie: "That's great! Another weekend spent living it up your way."

APPENDIX F6

CORRECT ANSWERS TO PRETEST TASK #3

A person named "Mike" is witnessing a scene involving Ron, Sarah, and Martin. The sentences below are the feelings, thoughts, and observations which Mike has about this scene. Whenever Mike's statement represents an observation or description, place an O in the blank; when it represents a description of Mike's feelings, place an F in the blank; and when it represents a thought, place a T in the blank.

_O_ 1. Ron and Sarah were sitting in the dining room.

_T_ 2. Martin was pacing nervously outside.

_O_ 3. Sarah said that Martin was inconsiderate and that she was trying to break off from him.

_T_ 4. You could see by the way they were holding hands that Ron and Sarah had strong feelings for each other.

_O_ 5. Suddenly, Martin came into the room and began shouting.

_T_ 6. You could hear the anger in his voice.

_T_ 7. The situation was tense for everyone.

_F_ 8. I was glad that I wasn't in the room.

_T_ 9. I felt their tenseness and anger.

_T_ 10. People should be very careful in issues of love and jealousy.

Jim has just completed the communication task. He is sitting in his work team. Shaking his head from side to side, he says, "This kind of thing ought to be outlawed." Below are the responses to this statement made by members of his team. If the response is a paraphrase, write in a P in the blank; if it is a perception check, write in a [illegible]; if it is a [illegible], write in a [illegible]; and if it is anything else, leave the space blank.

[illegible] 11. Do you mean that it shouldn't be allowed?

____ 12. I am interested in understanding your meaning. Would you please elaborate on what you said.

_____ 13. Don't you think that it's the same everywhere?

PC 14. I imagine that you're upset. Is that true?

P 15. Do you mean that testing people on communications when they thought that they might be doing a tinker-toy task is unfair?

P 16. Are you saying that we should raise a complaint with the Dean?

_____ 17. Do you want to tell me more about it?

_____ 18. You are shaking your head. What feeling are you conveying by that?

Charlie Brown and Linus are having a conversation about going to the mountains. Score each of Charlie's responses to Linus as Bl for blaming, Pl, for placating, Ir for irrelevant, Ra for rational, and AL for active listening. Score only the items with underlined spaces (___) preceding the sentence.

Charlie: "Wouldn't it be fun to go on a camping trip?"
Linus: "And get bitten by a queen snake, not on your life!"
Ra 19. Charlie: "Most snakes are not dangerous. Even those that are are rarely fatal, and no one has been bitten in the area where we are going for twenty years. And the queen snake avoids humans and is not venomous."
Linus: "Bull. Those queen snakes crawl right into your tent and chomp you. The woods are full of them this time of year!"
Pl 20. Charlie: "Once you get there, you'll stop worrying about snakes."
Linus: "Those queen snakes don't care what they do to you. Stay out of the woods, that's my motto."
Bl 21. Charlie: "You're always afraid of something. That's why we never get to go outdoors."
Linus: "No telling how many people have been chomped already this year. I'm not going to be one of them.
Al 22. Charlie: "You think it's best to stay in the city then. Is that right?"
Linus: "In the middle of the sidewalk!"
Bl 23. Charlie: "That's great! Another weekend spent living it up your way."

APPENDIX F7

PRETEST TEAM SURVEY

The responses you make to this survey will be anonymous.

Please individually rate your team on each of the dimensions below in relation to your experience in working together during the communication task only.

When you have finished, place the survey in the envelope marked TEAM SURVEYS and turn it into the instructor.

Do not talk during this exercise.

Procedure

For each of the scales below indicate your rating by placing an "x" in the appropriate box. Do not place an "x" above, below, or on the line between boxes. Try to choose the best response you can but work quickly.

e.g., Our team tackled the communication task with enthusiasm:

	x			
very much	much	some	little	very little

Now, begin working and please work quickly.

1. How satisfied were you with the attention and consideration your team members gave to your ideas and feelings during the communication task?

very little	little	some	much	very much

2. Our team tackled this communication task with enthusiasm

very little	little	some	much	very much

3. How even (e.g., similar) was participation among team members while doing the communication task?

very much even	even	somewhat even	uneven	very uneven

4. How much did the team tend to ignore or smooth over differences of opinion?

never	seldom	sometimes	often	always

5. How much did you feel hurt, angry, frustrated, put down, or blocked while doing the communication task?

very much	much	some	little	very little

6. How much blocking behavior (e.g., getting off the track, being irrelevant, cutting others off, blaming, placating) was there during the communication task?

very little	little	some	much	very much

7. How responsible did you feel for team productivity?

very little	little	some	much	very much

8. How direct were people in giving feedback and in expressing their feelings while doing the communication task?

very little	little	some	much	very much

9. How much active listening (e.g., paraphrasing, perception checking, asking for clarification or specifics) was done during the communication task?

very much	much	some	little	very little

10. When the communication skills were used in our team, the impact was:

negative	somewhat negative	neither + nor -	somewhat positive	positive

11. How much were team members out to win their own points during the discussion?

very much	much	some	little	very little

12. How much time did your team spend observing and discussing the way it was functioning while doing the communication task?

very much	much	some	little	very little

APPENDIX F8

INSTRUCTIONS TO SFB TEAMS RE COMPLETION OF PRETEST TEAM SURVEY

Enclosed you will find ten copies of a questionnaire or team survey.

Each member is to independently, in silence, fill out this questionnaire and then make a duplicate copy.

Put one copy (completed) and these task instructions into the envelope marked FURTHER INSTRUCTIONS: TEAM SURVEY.

Exchange this envelope for one marked POST TASK INSTRUCTIONS.

The instructions in this envelope will tell you what to do with the second, duplicate copy of the questionnaire.

APPENDIX F9

INSTRUCTIONS TO SFB TEAMS RE DISCUSSION OF PRETEST TASK #3

Your team task for this class period is to discuss your team experience in working together on the communication task with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

The following steps are designed to help you to achieve these objectives.

1. Take the questionnaire which your team members completed immediately after the communication quiz and, using the data from it, construct a 'team profile' which will enable your team to see the frequency and range of your members' responses to each of the questions.

   One of several methods of doing this is to have each member in turn report the answer to question 1, question 2, etc., from his completed questionnaire. The other members can post the reporting members' responses on their own questionnaire.

   The important point is to get an accurate picture of the type and range of responses made to each question.

   If you desire to remain anonymous, you can put all questionnaires into the center and mix them up. Each member then draws one and the process is the same as above.

2. Discuss in turn each question.

   A. What do you think the response should be for an effective team?

   B. What is your reaction to what is actually happening in your team?

   C. Give specific examples from your team experience which led you to answer the question the way you did.

3. When you have reviewed each question as in 2 above, identify those things which you and/or your team, in order to be more effective,

   A_1--might start doing

   B_1--might do more of

   C_1--might do less of

D_1--might stop doing

This may well include things not specifically raised in the questionnaire.

Be as Specific and Realistic as possible in developing plans to increase your team effectiveness.

e.g., Who is going to do what, under what circumstances, and when?
How you will check or determine if your plans for change are actually being carried out.

4. When you have finished, return these directions and all questionnaires to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F10

INSTRUCTIONS TO UFB TEAMS RE DISCUSSION OF PRETEST TASK #3

Your team task for this class period is to discuss your team experience in working together on the communication task with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

The following steps are designed to help you achieve these objectives:

1. Individually, without discussion with other team members, jot down those points, together with illustrations from your communications task session, which you feel should be discussed in order to achieve this session's objectives.

2. As a team, discuss the points and illustrations. Work to develop a deeper understanding of your members' points of view.

3. When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F11

INSTRUCTIONS TO NFB TEAMS FOR CLASS PERIOD FOLLOWING PRETEST TASK #3

Your team task is to use this class period in any way which you as a team think will help you to fulfill the requirements of this course.

Before discussing this with your team, jot down your personal ideas about how you think this time should be used. Next, discuss your team members' various ideas--select one and proceed with it.

When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F12

TRAINING TASK #1: INSTRUCTIONS

General Instructions

NOTE: The Activity Flow Sheet is to help you visualize the process described below.

You are now beginning a ten minute period during which you are to read in silence these instructions, the task problem, and the process observation instructions.

At no time during this task may you have materials other than those contained in the envelopes and writing instruments on your working surface or within sight.

In ten minutes, the instructor will direct you to the place where you will work in the room and you will begin the PROCESS OBSERVATION phase of this task.

Process Observation

You are to work on the task in partial collaboration with another team.

In order to encourage you to collaborate fully with that team, the two teams will sum their individual scores to achieve each team's score for the task. In other words, in order to discourage the competitive withholding of information while being observed by another team, each team success will be measured, in part, by the other team's success. You help yourself when you help the other team.

Details of where you will work and the team with which you will work are posted on the board.

When given instructions to move, you will have five minutes to reposition yourself according to the instructions on the board.

The instructions will indicate that one team is to sit in the inside circle of chairs and the other is to sit in the outside circle of chairs.

When given instructions to start, the team in the inner circle will work for five minutes on the task while the team in the outer circle will describe the inner team's process according to the instructions on the process description instruction sheet.

When given instructions to stop work and begin feedback, the inner team will cease work on the task and the outer team will describe the process it has observed. This feedback period will last for ten minutes.

The outer team should limit its feedback to descriptive observations in terms of the dimensions on the process description sheet. The inner team should limit its responses to paraphrases or to requests for clarification or elaboration.

When given instructions to stop feedback, the inner and outer teams should switch positions and the "new" inner team should work five minutes on the task while the "new" outer team observes.

When given instructions to stop work and begin feedback, the inner team should cease work and the outer team will describe the process it has observed. This feedback period will also last for ten minutes.

As before, the outer team should limit its feedback to descriptive observations in terms of the dimensions on the process description sheet and the inner team should limit its responses to paraphrases or to requests for clarification or elaboration.

When given instructions to stop feedback and separate, the teams should separate themselves and work in separate units for twenty minutes to complete the task.

Note again that in order to encourage full sharing of ideas and feedback and to discourage competitive withholding of information, the scores of both teams will be added to serve as each team's score.

When the instructor calls time the team should put all materials, including its answer, into the team envelope and wait.

The instructor will exchange that envelope for one marked B, which will require ten minutes to complete. Instructions will be inside this envelope.

When the game is completed, the instructor will give further directions.

APPENDIX [illegible]

[illegible]

TIME	ACTIVITY
[illegible]	Individuals read instruction sheet, [illegible]
[illegible]	
"[illegible]" [illegible] minutes	[illegible]
"[illegible]" [illegible] minutes	[illegible]
"Stop work and begin feedback" [illegible] minutes	[illegible] team gives feedback, [illegible] team responds with active listening
"Stop feedback" [illegible] minutes	Teams switch position, [illegible]
"Stop work and begin feedback" [illegible] minutes	Other team gives feedback, [illegible] team responds with active listening
"Stop feedback and separate" [illegible] minutes	[illegible] individually.
"Time" [illegible] minutes	Teams place [illegible]
[illegible] minutes	Further instructions from instructor

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

[illegible]

[illegible]

III. [illegible] Roles

Roles which must occur to some degree in order for a team to function effectively can normally [illegible] into two categories: (1) task roles, and (2) maintenance roles.

Both task and maintenance roles facilitate the accomplishment of the task, but the focus of task roles is on processing information about the task itself, whereas the focus of maintenance roles is on the maintenance of good working relationships among members of the team.

Maintenance roles are of two types: those which are [illegible] which serve to prevent breakdowns in the working relationships, and those which are introduced at a time when there is breakdown of a [illegible] nature, or interpersonal nature. When a breakdown has occurred, this second type of maintenance role is introduced by some team member in an attempt to understand and solve the underlying maintenance problem. When this is accomplished, the team returns back to task and [illegible] maintenance roles.

Knowing when to switch to a maintenance role is not always clear and is a skill which is only developed with experience and practice. The [illegible] is [illegible] and [illegible] finding out what works and what doesn't work. In general, it might be important to switch over to a maintenance role when one or several of the following conditions have occurred:

[illegible] the attendance is [illegible]
[illegible] the team [illegible] to be having difficulty [illegible]
[illegible]
There is [illegible] conflict or friction between members over an issue
The team doesn't seem to be able to come to an agreement or to carry out and implement a decision
[illegible] behaviour [illegible] frequent
Active listening becomes infrequent
One or several members' remarks and inputs to the team are out of balance
The group seems to end in boredom, frustration, futility [illegible], have feelings which are strong enough to block [illegible] contributions to the task
The team doesn't seem to have the motivation to carry out the task

IV. The [illegible] Team Leader

Often the responsibility for performing these task and maintenance roles falls to an appointed leader. However, the concept of leadership expressed here is that of a multilaterally shared responsibility. All members are responsible to some degree to see to it that these important roles are performed to a sufficient degree. And, as a group grows and gains confidence, these functions will increasingly be performed by a broad range of members.

[illegible] TASK AND RELATIONSHIP [illegible]

A. Task Roles:

1. Giving opinions, ideas, reasons, agreements, information: e.g., "I agree."
"I think it's a paraphrase."
"I think we ought to [illegible] [illegible] which is checked out."
"Let's [illegible] splitting into two groups, one to work on the [illegible] and one to work on the [illegible]."

2. Asks others' opinions, ideas, reasons, agreements, information:
e.g., "Any ideas for the [illegible]?"
"What do people think it is?"
"What are your reasons for thinking it's a paraphrase?"
"What should we do next?"

3. Tests understanding of ideas already expressed: clarifies, paraphrases, summarizes:
e.g., "Do you mean that two groups should come up with independent ideas and then we'll have their ideas to work with?"
"Would you [illegible] what you said, I didn't catch all of it."
"If we need people's ideas for the [illegible] and people's ideas for the [illegible], we'll have enough pieces for both."
"You are saying that there is no information that [illegible] checked properly, so it's not a paraphrase. Is that right?"

4. Summarizes or reviews: reviews what has gone on to present point (decisions made, arguments pro and con on some issues).
e.g., "We have seen four reasons why it is a paraphrase which are . . . and two reasons why it might not be, which are . . . Are these all the arguments?"
"We have reviewed for ten minutes the first part of the task and have ten minutes left to review the second part."

5. Consensus testing: tests the group's readiness to decide on an issue.
e.g., "We seem to be in general agreement that it is a paraphrase. Am I right?"
"Are we now ready to vote on that issue?"
"I sense that we are all pretty well decided on that issue. Let's [illegible] [illegible] [illegible]."

[illegible] Maintenance Roles.

[illegible] [illegible] [illegible] Maintenance [illegible]

[illegible] [illegible]

[illegible] [illegible]

[illegible] Maintenance Roles Dealing with Conflicts

[illegible] [illegible]

a

[illegible] [illegible] in [illegible] [illegible] of [illegible]

"Yes, you haven't said anything for quite a while. I'm wondering what you are [illegible] right now?"

"[illegible], you're shaking your head. Are you disagreeing with what we're doing?"

APPENDIX III

[illegible] [illegible] [illegible]

While you are a member of the outer circle you are to observe the comments of one member of the inner circle and record these on the rating form on the other side of this page. Below are the steps to follow:

1. The outer circle and inner circle team members should quickly match up so that each is watching [illegible]. Make sure that each member of the inner team is observed, even if this means that the outer team members have to observe several inner team members.

2. Sit in a position where you can see and hear the member of the inner team whom you are observing.

3. Check each comment made by the member of the inner team whom you are watching. If the person you are watching is speaking very rapidly, try to catch some of the parts and score them. Also, if the comment confuses you and you can't find its category, mark the "not rated" row. There will be many comments which do not fall in any of the categories.

4. When you are finished scoring (in five minutes) the instructor will say "Stop work and begin feedback," quickly sum all the scores and enter these in the TOTALS spaces.

5. When all observers have totalled the scores for the individuals whom they are watching, these should be entered and summed on the sheet marked "Overall Team Scores." Someone in the outer circle will mark this sheet as each outer circle observer calls out the totals for his person. This sheet and the individual sheets should then be passed to the inner circle members and are to be returned to their [illegible].

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] to the inner team [illegible] [illegible]

Observer: Name ______________________ Date ______________

Class Observed: ______________________ Time ______________

Category	[illegible]	Total
[illegible] opinions, ideas, reasons, agreement, [illegible] information.		
[illegible] teacher's opinions, ideas, reasons, agreement, information.		
[illegible] understanding of ideas already expressed [illegible]		
[illegible]		
[illegible]		

TOTAL TALK ______

[illegible]		
[illegible]		
[illegible] Observation		
Interruption [illegible]		

TOTAL MAINTENANCE ______

[illegible] comments which could not be [illegible] which didn't fall in the above.		

TOTAL TALK, MAINTENANCE, OTHER ______

APPENDIX [illegible]

TEAM TOTALS

[illegible]	[illegible]								[illegible]
(1) [illegible] opinions, ideas, reasons, agreement, gives information.									
(2) [illegible] another's opinions, ideas, reasons, agreement, information.									
(3) [illegible] understanding of ideas already expressed; [illegible]									
(4) [illegible] people's activities, ideas, [illegible]									
(5) [illegible]									

TOTAL TASK FOR TEAM

B1: [illegible]									
B2: [illegible]									
B3: [illegible]									
B4: [illegible]									

TOTAL MAINTENANCE FOR TEAM

C: Other comments which could not be scored or which don't fall in the above categories.									

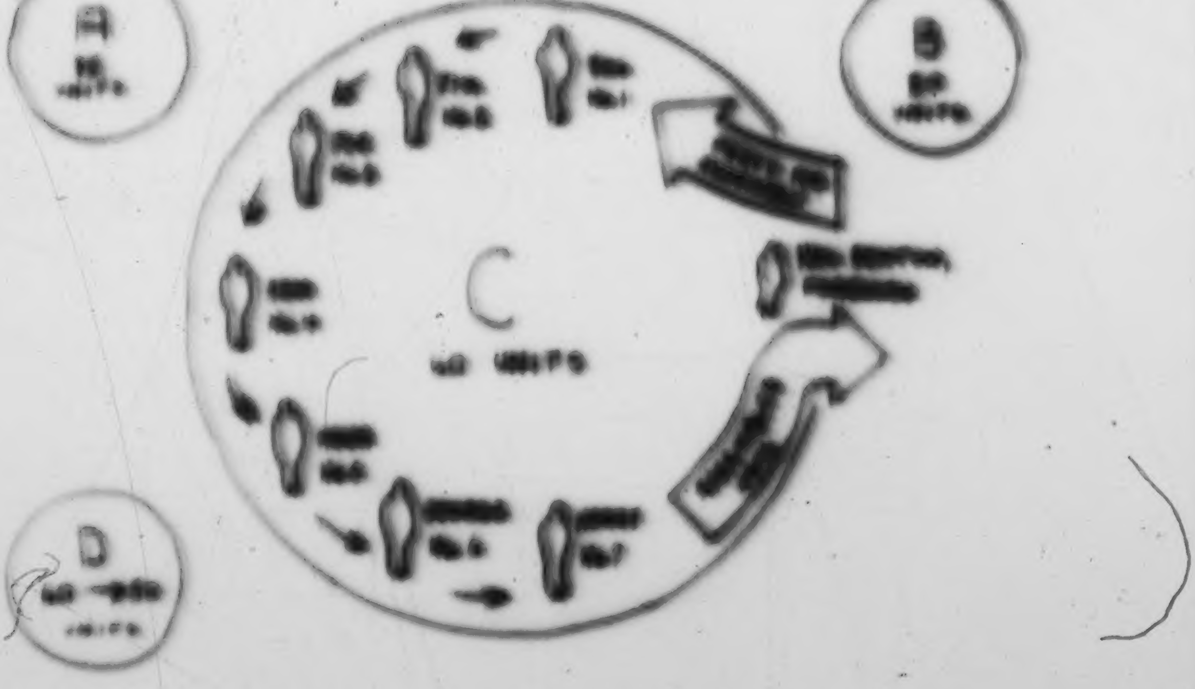
TOTAL OF ALL COMMENTS FOR TEAM

APPENDIX [illegible]

[illegible]
[illegible] ASSEMBLY PROBLEM

This team has been called in as consultants to solve the following problem.

Consider a [illegible] situation in which seven men work in a circle and assemble part of a car (carburetor or instrument panel, for example). The basic unit enters the circle at one point, and each person adds his pieces and pushes the unit to the next worker, who adds his elements. When the unit leaves the circle, it is a completed unit. This work arrangement is diagrammed below.



Suppose there are four such [illegible] assembly stations, each one supervised by a foreman. Suppose, further, that station A assembled 85 units per day; station B, 80 per day; station C, 60 units per day; and station D, 50 units. It is a fact that station C previously assembled 60 units. The foreman was dissatisfied with the production and reprimanded the group. Following the reprimand, production fell to 50 units per day.

The assembly work is simple and requires a minimum of training for each step. The aptitude requirement is primarily good finger dexterity. The materials for each assembly position are located in bins which are kept supplied by material handlers. Thus, each worker has his essential material at his elbow. The job has been analyzed by time-and-motion experts so that the positions are of equal difficulty. Pay is based on hourly rates. The total factory production is dependent upon receiving the required number of assembled units from these four stations. The production is now so low that the factory has had to slow down. The desired quota is 300 parts per shift for the four stations combined. We are concerned with station C, which is producing at the rate of 50 units. The work piles up at the position of Joe Brown. The unit must pass through his position 3, and he always has several units piled up waiting for him. Foremen on non-production jobs are not willing to accept Joe as a transfer. Joe is a man of 50 with thirty years of service in the company. Emphasis on improving production has brought his deficiencies to light. He is a nice, congenial fellow, but slow and unhandy. However, he tries. Joe has to work for a living.

Instructions for Teams

Assume that your team has been hired by the factory to solve the production problem. You have been sent to the plant and have found that the center of the problem is located in one of the assembly stations, station C. The foreman of the station C tries to raise his group production but he has a bottleneck in Joe in the number 3 position. Work piles up at this position and Joe cannot seem to keep up the pace.

In light of the facts of the situation, your team of expert-consultants has to prepare collectively a practical solution to the bottleneck problem.

Present in writing what you feel as a team is the best solution to the problem.

APPENDIX F16

SCORING PROCEDURE FOR "PARASOL" PROBLEM

A great deal of difficulty was experienced in scoring the solutions to the "parasol" problem. Initially the following rationale was presented to the students together with an invitation to present written appeals.

The parasol problem was developed by Dr. N. R. F. Maier and reported in Principles of Human Relations, 1952. Since that time he, and others, have worked with it a great deal. The scoring system used here is a slight modification of that devised by Dr. Maier. He used seven categories of answers whereas the present system collapses these categories to four in keeping with the work at the University of Toronto. ([illegible], [illegible]., Effects of T-group training and cognitive learning on small group effectiveness. 1967 unpublished dissertation.)

1. Best Solution - 16 points

   a. Periodically have the men exchange their places progressing from one position to the next in a counter-clockwise direction.

   b. Solutions that recognize differences in ability and arrange for some way of permitting the more able workers to help the less capable.

   For example: - Reorganize job so that some positions will have less work.
   - Have Joe change place periodically with fastest man.
   - Have others help Joe.

2. Second Best - 12 points

   Solutions directed at Joe that suggest improving him.

   For example: - Train Joe.
   - Give Joe a talk and warn him.

3. Third Type - 8 points

   Solutions that suggest removing Joe from the assembly line.

   For example: - promote Joe to foreman.
   - Dismiss Joe.
   - retire Joe.

D. Fourth Type - 4 points

Solutions violating the stated conditions of the problem or inconsistent with these stated conditions.

For example: - transfer Joe to another unit.
- introduce piece rate.
- leave situation unaltered.
- match ability in all four units.
- put Joe in position 7 (no help).

IF YOU HAVE A STRONG DISAGREEMENT WITH THIS SCORING SYSTEM, AND REASONS TO SUPPORT YOUR ARGUMENTS FOR A DIFFERENT SCORING SYSTEM, YOU MAY SUBMIT A WRITTEN BRIEF CHALLENGING THE SCORE GIVEN TO YOUR TEAM. THIS MUST BE RECEIVED WITHIN ONE WEEK OF NOTIFICATION OF MARK ALLOCATIONS FOR THIS TASK.

The majority of the student teams appealed the scoring system and in light of the arguments which they made the following scoring system was devised by the two course instructors and the writer.

A. Best Solution - [illegible] points

1. Periodically have the men exchange their places progressing from one position to the next in a counter-clockwise direction.

2. Solutions that recognize differences in ability and arrange for some way of permitting the more able workers to help the less capable.

B. Second Best - [illegible] points

1. Solutions directed at improving Joe.

2. Solutions directed at letting Joe make his maximum contribution to the total factory situation.

For example: - transfer Joe to a production unit operating at a level that is within his capacity.

- make Joe a floater.

3. Solutions directed at avoiding dissension among workers.

For example: - place all men on piece rate wages.

C. Third Best - [illegible] points

1. Remove Joe from the production situation through promotion or retirement.

D. Fourth Best - [illegible] points

1. Solutions which fail to deal with the defined problem.

For example: - fire [illegible] foreman.
- hire another man.
- move Joe to position [illegible] (no help).

Fifth Type — 10 points

Solutions violating the stated conditions of the problem.

The scoring difficulties experienced with this task were a direct reflection of its low solution specificity. While it was a useful teaching problem the writer has little confidence that it can clearly distinguish between the quality of different solutions, except, of course, for the integrative solution of counter-clockwise rotation.

APPENDIX [illegible]

[illegible] TEAM SURVEY FOR TRAINING TASK [illegible]

Team #: ____________________

Please individually rate your team on each of the dimensions below, in relation to your experience in working together during the task just completed.

Do not talk during this exercise.

Procedure:

For each of the scales below, indicate your rating by placing an "X" in the appropriate box. Do not place an "X" above, below, or on the line between boxes. Try to choose the best response you can but work quickly.

E.G.,

Our team tackled the communication task with enthusiasm:

very much	much	some	little	very little

NOW, BEGIN WORKING AND PLEASE WORK QUICKLY.

1. TEAM DEVELOPMENT

How successful was your team in making and carrying out plans for change as a result of the last survey?

very successful	successful	some success	a little success	no success

COMMUNICATION

How much active listening (e.g., paraphrasing, perception checking, asking for clarification) was done?

very little	little	some	much	very much

How responsible did you feel for team productivity?

very much	much	some	little	very little

4. **TASK PARTICIPATION ROLES**

How many members participated in task-focused roles?

none	few	some	many	all

5. **MAINTENANCE PARTICIPATION ROLES**

How many members participated in maintenance-focused roles?

all	many	some	few	none

6. **MORALE**

Our team tackled the problem with enthusiasm.

none	few	some	many	all

PROCESS OBSERVATION

How much time did the team spend observing the process and discussing the way it was functioning?

very much	much	some	little	none

8. **FREEDOM**

How free did you feel to express your ideas about the task and your feelings about what was happening during the task?

very much free	much	some	little	very little

9. **COMMUNICATION SKILLS**

When the communications skills were used in our team, the impact was

very positive	positive	neutral	negative	very negative

10. **INFLUENCE**

How much influence does the least influential team member have on team conclusions and decisions?

very little	little	some	much	very much

APPENDIX [illegible]

[illegible] TEAM FUNCTIONING FOR DISCUSSION

TRAINING TASK

Your team task for this class period is to discuss your team experiences in working together on the parasol assembly problem with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

The following steps are designed to help you to achieve these objectives.

1. Take the questionnaire which your team members completed immediately after the parasol problem and using the data from it, construct a "team profile" which will enable your team to see the frequency and range of your members' responses to each of the questions.

One of several methods of doing this is to have each member in turn report the answer to question 1, question 2, etc., from his completed questionnaire. The other members can post the reporting members' responses on their own questionnaire.

The important point is to get an accurate picture of the type and range of responses made to each question.

If you desire to remain anonymous you can put all questionnaires into the center and mix them up. Each member then draws one and the process is the same as above.

2. Discuss in turn each question.

    a. What do you think the response should be for an effective team?

    b. What is your reaction to what is actually happening in your team?

    c. Give specific examples from your team experience which led you to answer the question the way you did.

3. When you have considered each question [illegible] identify those things which you and/or your team, in order to be more effective,

1 - might start doing
2 - might do more of
3 - might do less of
4 - might stop doing.

This may well include things not specifically raised in the questionnaire.

Be as specific and realistic as possible in developing plans to increase your team effectiveness.

e.g. - who is going to do what, under what circumstances, and when
- how you will check or determine if your plans for change are actually being carried out

4. When you have finished, return these directions and all questionnaires to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F11

PR TEAM DIRECTIONS FOR DISCUSSION OF

TRAINING TASK #1

The team task for this class period is to discuss your team experiences in working together on the Parasol Assembly Problem with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

The following steps are designed to help you achieve these objectives.

1. Individually, without discussion with other team members, jot down those points, together with illustations from your parasol problem session, which you feel should be discussed in order to achieve this sessions' objectives.

2. As a team, discuss the points and illustration. Work to develop a deeper understanding of your members' points of view.

3. When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX XII

[illegible] TEAM INSTRUCTIONS FOR CLASS PERIOD

FOLLOWING TRAINING TASK 1

Your team task is to use this class period in any way which you as a team think will help you to fulfill the requirements of this course.

Before discussing this with your team, jot down your personal ideas about how you think this time should be used. Next, discuss your team members' various ideas — select one and proceed with it.

When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX [illegible]

[illegible] ON INDIVIDUAL & GROUP

PROBLEM SOLVING

This paper presents problem-solving ideas which have been used and which produce significant increases in the quality of the solutions adopted by decision-making teams.

1. Problem-solving sequence. There are three important problem-solving steps:

   1. List all alternative solutions.
   2. List all possible consequences for each alternative.
   3. Evaluate each alternative in terms of which consequences are most desirable as a solution to the problem.

IT IS IMPORTANT THAT YOU DO EACH OF THESE STEPS IN SEQUENCE. E.G., THAT YOU DO NOT START TO EVALUATE ALTERNATIVES BEFORE YOU HAVE LISTED ALL THE ALTERNATIVES YOU CAN THINK OF AND BEFORE YOU HAVE LISTED THE POSSIBLE CONSEQUENCES FOR EACH ALTERNATIVE. THIS IS BECAUSE MAIER HAS FOUND IN STUDIES THAT EVALUATION AND CRITICISM INHIBIT IDEA-GENERATION AND THAT IT IS BEST FOR A TEAM TO BE PROBLEM-MINDED AND IDEA-SEEKING BEFORE BECOMING SOLUTION-MINDED.

Below is an example of these steps. The problem is how to get to Vancouver by next week (12 days from now).

Step 1. List the alternatives: Fly, Train, Drive, Hitch, Bicycle, etc.

NOTE THAT THERE ARE MORE ALTERNATIVES. EACH TEAM MUST CONVINCE ITSELF THAT IT HAS SPENT ENOUGH TIME TO CONSIDER MOST OR ALL OF THE SIGNIFICANT ALTERNATIVES. OBVIOUSLY, NOT ALL ALTERNATIVES COULD EVER BE LISTED AND THE TEAM WILL NOT ALWAYS HAVE A GREAT AMOUNT OF TIME TO DO SO.

NOTE ALSO THAT ALTERNATIVES LIKE BICYCLE ARE NOT EVALUATED AS BAD OR GOOD EARLY ON. ALL ALTERNATIVES ARE ACCEPTED WITHOUT CRITICISM AT THIS POINT.

Step 2. List the important consequences for each alternative.

	Cost	Time	Safety	Probability of arriving on time	Sightseeing potential
Fly	[illegible]	6 hrs	good	good	none
Train	[illegible]	3 Days	good	good	good
Drive	[illegible]	2, 3 Days	medium	good	good
Hitch	[illegible]	2, 3, 4 Days	med/low	medium	good
Bicycle	[illegible]	6, 7 Days	good	good/med	good

NOTE THAT JUST AS THE TEAM COULD SPEND AN INFINITE AMOUNT OF TIME IN DECIDING THE ALTERNATIVES, SO COULD A TEAM SPEND AN INFINITE AMOUNT OF TIME IN DECIDING WHAT ARE THE IMPORTANT CONSEQUENCES. THE IMPORTANT RULE IS LET YOURSELF SPEND ENOUGH TIME SO THAT YOU HAVE REASON TO BELIEVE THAT YOU HAVE THOUGHT ABOUT MOST OF THE IMPORTANT CONSEQUENCE CATEGORIES.

NOTE ALSO THAT CONSEQUENCES OFTEN DEAL WITH FACTUAL INFORMATION WHILE SOME DO NOT. E.G., THE COST OF FLYING TO VANCOUVER IS FACT. BUT SIGHTSEEING POTENTIAL, WHETHER GOOD OR POOR, IS THE BEST GUESS ONE CAN MAKE.

Step 3. Evaluate the alternatives in terms of their consequences.

EVALUATION INVOLVES GETTING A CLEAR STATEMENT OF YOUR OWN VALUES AND DECIDING IN TERMS OF THOSE VALUES. SEVERAL EXAMPLES FOLLOW TO DEMONSTRATE THAT THE VALUES YOU DECIDE TO USE AFFECT THE ALTERNATIVE YOU CHOOSE.

1. If I am wealthy, in a hurry, then FLY.
2. If I am wealthy, not in a hurry, value sightseeing, then TRAIN, DRIVE, HITCH OR BICYCLE.
3. If I am wealthy, not in a hurry, value exercise and safety, then BICYCLE.
4. If I am poor, have to be on time, then TRAIN OR BICYCLE.
5. If I am poor, have plenty of time, am not worried about safety, then BICYCLE OR HITCH.
6. If I have to travel in less than 2 days regardless of cost, then FLY, TRAIN OR DRIVE.

NOTE AGAIN THAT CHOICE DEPENDS ON VALUES. IN SOME CASES VALUES ARE CLEARLY STATED AS A PART OF A PROBLEM. IN OTHERS, YOU ARE ASKED TO SOLVE THE PROBLEM, BUT YOU MUST DECIDE WHAT WOULD BE THE RELEVANT VALUES FOR MAKING THE CHOICE. THUS A TEAM NEEDS TO SPEND TIME CONSIDERING THE QUESTION "WHAT ARE THE IMPORTANT VALUES?"

NOTE ALSO THAT CHOICE ISN'T ALWAYS AUTOMATIC. FOR EXAMPLE, IS THE IMPROVED SIGHTSEEING POTENTIAL FOR TRAIN WORTH THE EXTRA TIME WHICH MUST BE TAKEN FOR TRAVEL?

Disagreement is often a valuable tool for creativity and [illegible] in problem-solving. Disagreement can be turned into a stimulus for new ideas.

Often, people don't fully understand a problem and yet they try to solve it. Teams should spend some time redefining the problem in their own words so that there is certainty that all persons are understanding the problem in the same way. Paraphrasing is a useful skill in clarifying the problem.

APPENDIX F/4

TRAINING TASK #2A

General Instructions

Your task as a team is to complete this task by the time noted on the blackboard.

To achieve this, read the background on Peerless Corporation and the task itself. Then, as a team, work on the task and complete the enclosed team answer sheet.

All material--these directions, the task description, and your team's answer sheet--should be placed in your team envelope and turned in to the instructor no later than the time noted on the blackboard.

When you have turned in the above material, you will receive envelope #2 which contains further directions and should take ten minutes to complete.

Your task for this class period will be complete when you have returned envelope #2 to the instructor.

Penalty points will be assessed for missing material.

. . .

Background on Peerless Data Corp.

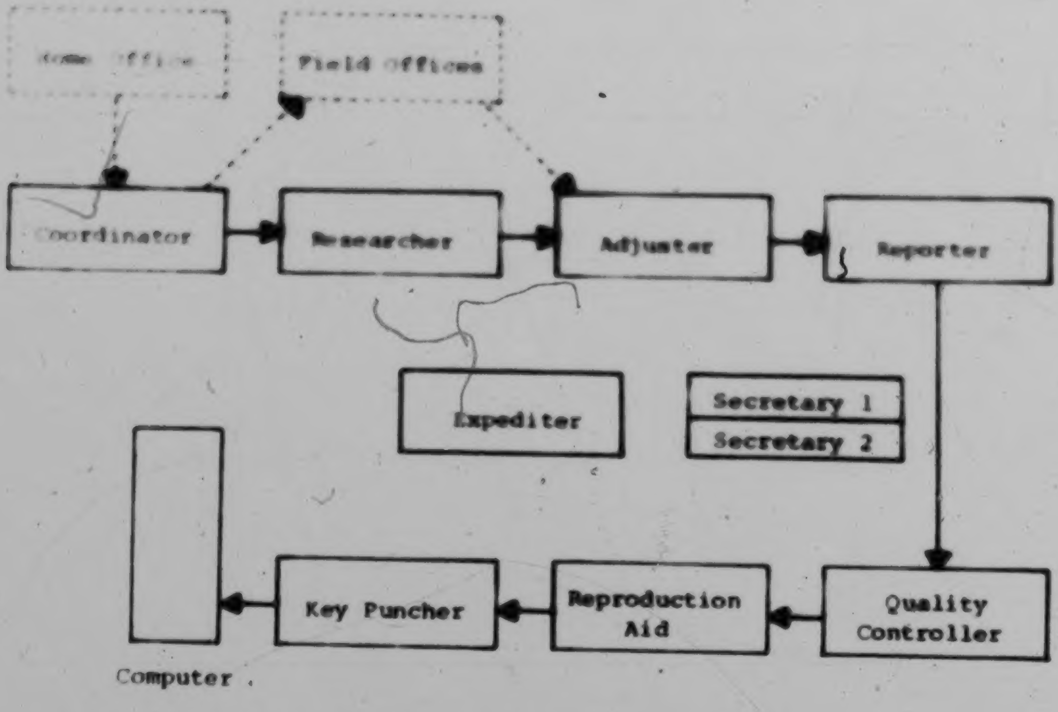
Your team, Probsolv. Inc., has been called in by the newly appointed Operations Director of the Bigtown office of Peerless Data Corp. The manager has a mandate to make the Bigtown office profitable as it is currently the lowest performing unit of its kind in the country and he has called upon your team to give him advice.

Peerless Data Corp. is a service organization. Its main service is providing information on companies and organizations of every size and type. Each region office serves as a center for collecting and processing data. Information is collected from field reporters, credit agencies, the companies and their customers, and various research sources. All of this data is then organized and processed and eventually packaged in its own file. Bigtown office is therefore involved in producing research files as efficiently as possible. Each office operates as a [illegible] office with the Operations Director making all decisions independently.

There is a staff of ten people. Morale is low, that's obvious. Supervision has been neglected in the past. The office itself is inadequate and overcrowded. Staff and equipment are not being used efficiently. As a result of these problems, production is at a low of forty files per day (should be sixty per day for this size staff), growth is stagnant, and the office is operating at a loss.

Bigtown's Operations Director's objective is to build annual profits to 150,000 within a year's time. He can only accomplish this by increasing file production from 40 units per day to 75 per day, while keeping expenditures at minimum. As a secondary, long-term objective, he must give adequate consideration to growth, making sure that none of his decisions provide immediate gains at the expense of future profits.

Below is a chart showing how the data files are processed through the operation.


Home Office
Field Offices
Coordinator
Researcher
Adjuster
Reporter
Expediter
Secretary 1
Secretary 2
Quality Controller
Reproduction Aid
Key Puncher
Computer

The Home Office activates the process by requesting data compilation on a specific account. When the request is received, the Coordinator sets up a file, directs the appropriate field office to visit account and collect local information. (Field Offices are not under Bigtown's control.) While the Field Office is completing its assignment, the new file is forwarded to the Researcher where a search for pertinent data is made in the library and existing records. Relative information is added and the file is then forwarded to the Adjuster. Here the information is combined with the input from the field office; the data is organized, and a variety of calculations, ratings, and adjustments are made. The file is then passed to the Reporter, where a formal report is dictated, summarizing all findings. (The Reporter has two secretaries who transcribe his reports.) The final report and file then go to the Quality Controller for review. He verifies accuracy and completeness, then forwards everything to the Reproduction Aid. The RA copies every item in the file (copy goes to home office, original remains here). Before original is filed, it goes to Key Puncher who transfers data to computer. The computer stores the information for demand availability. The Expediter follows files from station to station, controls movement, and fills in when employees are absent.

Here is a list of Bigtown's employees, shown by title and salary:

Coordinator	12,000
Researcher	8,000
Adjuster	9,000
Reporter	9,000
Secretary 1	5,000
Secretary 2	6,500
Quality Controller	10,000
Reproduction Aid	6,000
Key Puncher	9,000
Expediter	10,000

The Operations Director's salary is $20,000.

Peerless Data has established four different salary grades which are reflected in the figures given above. The four different grades are:

Grade 1	$5,000 to $7,500	Clerical jobs
Grade 2	$7,501 to $9,000	Staff (performing one function)
Grade 3	$9,001 to $11,000	Staff (capable of performing multiple functions)
Grade 4	$11,001 and up	Supervisory or executive

An employee cannot move from one pay level to another unless he's promoted or his job is broadened to include more than one function.

Office Relocation

Your team, Probsolv Inc., has been asked by the Operations Director to select a new site for his operation.

They currently occupy 4,000 square feet of office space which is barely adequate for the staff, files, and operating equipment. There is no doubt that the cramped quarters contribute to the low level of production.

Their current lease is about to expire (60 days).

The Operations Director would like to meet his space needs for at least three years, preferably five.

The normal rate of business growth is about 20 per cent a year with a commensurate increase in personnel and space; the office should eventually conform with this pattern. As a rule of thumb, total space is usually allocated at 500 square feet per employee. (For example, at present they should have about 5,500 square feet available.) The current lease will revert to a month-to-month basis at the end of the sixty days. Right now, they pay $6,000 a year; when the lease expires, the monthly rent will be $700. A recent poll of the employees indicated that all of them would stay with the company if the move didn't increase the commute from the present location more than 15 minutes each way.

In light of the above, a real estate broker has recommended the following locations:

Location A: This involves 9,000 square feet of operating space at an annual rental of $10,000. The owner requires a five-year lease. He will provide required painting and renovation work at no cost. This space is located adjacent to the present location and the staff would not be inconvenienced. The cost of the move to Location A would be $1,500. This space is available in thirty days, at which time Bigtown's operation will be committed to paying rent.

Location B: This site is on the opposite side of town from the existing office, about eight miles away, and will take ten minutes each way during rush hour traffic. The space consists of 12,000 square feet. A three-year lease is required at $10,000, with an option for two additional years at $10,500 a year. Location B will be available in ninety days for them to move in. Refurbishing costs run about $2,000. The move itself will require an estimated $2,000. Since the present lease will expire before Location B is available, the owner has offered to pay the extra month's rent at the current location.

Location C: Location C is 6,000 square feet and costs $8,000 per year. It will be available in sixty days. They can sign any length lease they want, up to ten years. The move here will cost $1,500, but the landlord has offered to absorb the cost of the move if they sign a five-year lease. They'll have to pay for their own refurbishing, however--a cost of $1,200. This location is five minutes drive from the present facility.

Location D: This location is a good buy and close to the airport which is a plus for Peerless on occasion. The space available is 12,000 square feet. Estimated refurbishing costs are $1,000. Location D is in reasonable proximity to the present site (about five minutes away). The cost of the space is $9,500 a year. The owner can only give a three-year lease since the entire area will be torn down and redeveloped by the city at that time. The cost of the move is $1,500.

The cost of moving and/or repairs in all cases will be charged against the first year's lease.

Based upon the information given, rate each location and record your team's recommendations on the answer sheet.

Team Answer Sheet

Team No. ________

Record your team's recommendations by placing a "1" beside the best location, a "2" beside the second best, a "3" beside the third best, and a "4" beside the worst location.

______ Location A

______ Location B

______ Location C

______ Location D

When completed, please place all material back in your team envelope and turn in to instructor. Penalty points will be assessed for missing material

ALL RIGHTS RESERVED. The text of
this publication or any part thereof
may not be reproduced in any manner
whatsoever.
Copyright 1972--Education Research

APPENDIX F25

CORRECT[1] ANSWERS TO TRAINING TASK #2A

Record your team's recommendations by placing a "1" beside the best location, a "2" beside the second best, a "3" beside the third best, and a "4" beside the worst location.

3 Location A

1 Location B

4 Location C

2 Location D

When completed, please place all material back in your team envelope and turn in to instructor. Penalty points will be assessed for missing material.

CORRECT ANSWERS WERE DEFINED AS THOSE SUPPLIED BY THE AUTHORS OF THE DECISION-MAKING TASK.

---

[1] Correct answers were defined as those supplied by the authors of the Decision-Making Task.

APPENDIX F26

TRAINING TASK #2B

General Instructions

Your task as a team is to complete this task by the time noted on the blackboard.

To achieve this, read the background on Peerless Corporation and the task itself. Then, as a team, work on the task and complete the enclosed team answer sheet.

All material--these directions, the task description, and your team's answer sheet--should be placed in your team envelope and turned in to the instructor no later than the time noted on the blackboard.

When you have turned in the above material, you will receive envelope #2 which contains further directions and should take ten minutes to complete.

Your task for this class period will be complete when you have returned envelope #2 to the instructor.

Penalty points will be assessed for missing material.

. . .

Reproduction Backlog

Your team, Probsolv Inc., has been asked by the Operations Director to select a course of action to solve Peerless' reproduction backlog.

There is a consistent back-up, or bottleneck, created by the reproduction station. The Reproduction Aid can handle approximately 500 copies per day, since each one requires about one minute for processing. (It takes about 30 seconds to remove each document from its file, position in copies, return to file, and about 30 seconds for machine to process the copy.) Each file contains an average of 15 documents (ten 8½ x 11, five 5 x 8). At the current rate of 40 files per day, there is a substantial accumulation of copy work throughout the week; when the operator is out sick or the equipment is down, the problem becomes more acute. The cost per copy on your present copier is six cents. It's completely amortized and in good working condition.

Two broad courses of action are possible. One would be to add another Reproduction Aid (at the same pay level as the first). This would expedite the operation, increasing production 50 per cent--to about 750 copies per day. The other course is to replace the present equipment with a more sophisticated copier which, hopefully, would enable them to keep reproduction in concert with the rest of the operation.

The following information is in your possession regarding the three copy machines which might be suitable:

Transfax: Each copy takes 10 seconds of machine time; handling time is cut in half to 15 seconds. Cost per copy comes to 4 cents. The Transfax is sold at a price of $1,500 with a year's free service guarantee. After the first year, a service contract of $250 per year is required.

Reprodata: Makes copy in 5 seconds and cuts handling time to 10 seconds. Machine is leased rather than sold outright. Three-year lease would be $3,000. Cost per copy determined by monthly volume: first 10,000 copies at 10 cents, next 10,000 at 5 cents, any additional copies above 20,000 made during month would cost 3 cents each. A service contract, while optional, is desirable; it goes for $500 a year and would be needed immediately.

Flocopy: This unit works on a different principle than the two previous copiers. It cuts each copy to size (rather than producing everything on 8½ x 11). The paper is stored on an 8½" roll and each copy is cut automatically to the exact length of the original. The cost per copy is therefore based on a per inch basis. Copies that are 8½" wide would be costed at ½ cent per inch. For example, an original 8½ x 11 costs 5.5 cents to reproduce. Flocopy takes 8 seconds for machine processing and 8 seconds for handling each copy. It sells for $3,600. Service is free as long as manufacturer's paper and supplies are used.

NOTE: It is company policy to amortize all office equipment over first three years of its life. The company expects a 10 per cent annual growth rate in its operations.

Based upon the information given, rate each course of action and record your team's recommendations on the answer sheet.

Team Answer Sheet

Team No. ________

Record your team's recommendations by placing a "1" beside the best solution, a "2" beside the second best, a "3" ~~beside the~~ third best, and a "4" beside the worst solution.

_____ Adding a Reproduction Aid

_____ Transfax

_____ Reprodata

_____ Flocopy

When completed, please place all material back in your team envelope and turn in to instructor. Penalty points will be assessed for missing material.

Copyright 1972--Education Research

APPENDIX F27

CORRECT[1] ANSWERS TO TRAINING TASK #2B

Record your team's recommendations by placing a "1" beside the best solution, a "2" beside the second best, a "3" beside the third best, and a "4" beside the worst solution.

4 Adding a Reproduction Aid

3 Transfax

2 Reprodata

1 Flocopy

When completed, please place all material back in your team envelope and turn in to instructor. Penalty points will be assessed for missing material.

CORRECT ANSWERS WERE DEFINED AS THOSE SUPPLIED BY THE AUTHORS OF THE DECISION-MAKING TASK

---

[1] Correct answers were defined as those supplied by the authors of the Decision-Making Task.

APPENDIX F28

SFB TEAM SURVEY AT COMPLETION
OF TRAINING TASK #2

Team Number ____________

Please individually rate your team on each of the dimensions below in relation to your experience in working together on the team task just completed.

You will likely be given an opportunity to discuss the results of the survey with your team at a later time. Consequently, you are encouraged to make notes on the margins which will remind you of particular-incidents which led you to answer specific questions the way you have.

Do not talk during this exercise.

When you have completed the survey, place it in your team envelope and turn it in to the instructor.

For each of the scales below, indicate your rating by placing an "x" in the appropriate box.

1. Team Development: How successful was your team in making and carrying out plans for change as a result of the last survey?

very successful	successful	some success	a little success	no success

2. Communications: Team members actively listened to each other.

very little	little	some	much	very much

3. Problem-solving: The amount of time we spent on idea-generation was:

much too little	little too much	about right	little too little	much too little

Each solution proposal was adequately evaluated:

definitely not true	not true	somewhat true	true	very true

4. Decision Making: We made most of our decisions by

unanimous consent	consensus	majority rule	minority rule	other

5. Commitment: I have confidence that we selected the correct solution.

very much	much	some	little	very little

6. Maintenance Roles: Members of our team played maintenance-focused roles when they were required.

very little	little	some	much	very much

7. Openness: How free did you feel to express disagreement with ideas or proposals that were expressed?

very much free	much	some	little	very little

8. Communication Skills: When the communication skills were used in our team, the impact was:

very positive	positive	neutral	negative	very negative

9. Involvement: How responsible did you feel for team productivity?

very much	much	some	little	very little

10. Processing: How much time did the team spend observing its process and discussing the way it was functioning?

very much	much	some	little	very little

APPENDIX F29

UFB TEAM DIRECTIONS AT THE COMPLETION OF TRAINING TASK #2

In the time remaining in this class period, individually--without discussion with other team members--jot down some notes on and illustrations of your team's experience together in working on the last team task which you feel should be explored by your team in order:

1. that your team develops a better understanding of team effectiveness;

2. that your team improves its functioning.

When you have completed your notes, place them in envelope #2 together with these directions and turn them in to the instructor. When this is done, your task for this class period is complete.

Penalty points will be assessed for missing material.

APPENDIX F30

NFB TEAM DIRECTIONS AT THE COMPLETION OF TRAINING TASK #2

In the time remaining in this class period, individually--without discussion with other team members--jot down your ideas as to how you think your team should use a "free" class period (if one were made available) to help you to fulfill the requirements of this course.

When you have completed your notes, place them in envelope #2 together with these directions and turn them in to the instructor. When this is done, your task for the day is complete.

Penalty points will be assessed for missing material.

APPENDIX F31

SFB TEAM INSTRUCTIONS FOR DISCUSSING
TRAINING TASK #2

Your team task for this class period is to discuss your team experience in working together on the last team task with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

You are to follow the force-field problem analysis procedure which is outlined in detail below.

First, read all steps, and then begin work on each in turn.

Step 1 Take the questionnaire which your team members completed immediately after the task and, using the data from it, construct a "team profile" which will enable your team to see the frequency and range of your members' responses to each of the questions.

One of several methods of doing this is to have each member, in turn, report the answer to question 1, question 2, etc., from his completed questionnaire. The other members can post the reporting members' responses on their own questionnaire.

The important point is to get an accurate picture of the type and range of responses made to each question.

If you desire to remain anonymous, you can put all questionnaires into the center and mix them up. Each member then draws one and the process is the same as above.

Step 2 Discuss in turn each question.

a. Give specific examples from your team experience which led you to answer the question the way you did.
b. Share your reaction to what is actually happening in your team.

Step 3 As a team, identify items where there is a discrepancy between actual team functioning vs. desired team functioning. These items can be defined as problems. E.g., you might find that people don't feel they are being "heard" and the team feels this should be happening.

Step 4 The following are steps in a problem-solving approach called force-field analysis. This technique is especially useful for solving problems dealing with human interaction.

Step A Clearly state the problem: e.g., Team members do not feel they are being heard.

Step B Create two lists: (1) forces which increase the problem, and (2) forces which lessen the problem.

e.g.

Forces which increase the problem	*Forces which lessen the problem*
1. Interrupting others	1. Paraphrasing
2. Changing the subject	2.
3.	3.
4.	4.
etc.	etc.

DO NOT EVALUATE SUGGESTIONS FOR THESE LISTS. EARLY EVALUATION REDUCES IDEA-GENERATION. ACCEPT ANY SUGGESTION COMING FORTH.

Step C Pick key items on each list--do this quickly--by group census.

e.g., Working on paraphrasing is very important.
Working on interruptions is next important.
etc.

Step D Problem-solving: Ask--How can the force be reduced if it increases the problem or increased if it lessens?
e.g., How can we increase paraphrasing?

Alternatives: A_1 - one person to paraphrase each person for entire meeting
A_2 - each person paraphrases the person who just spoke
A_3 - the speaker can request that he be paraphrased
A_4 - etc.

Step E Select the alternate which will best meet the values of the group. (You can first generate consequences for each alternate and then evaluate.)

Step F Be sure to develop specific implementation plans. Who will do what, when, or how often. How will we check to be sure plans are being carried out?

Now, as a team, follow through this procedure, A through F, for each or several of the problem areas you have identified via the questionnaire.

Note also that you can introduce problems which are not from the questionnaire.

Following are worksheets for this task.

. . .

Step A List the problems the team wants to work on.

Step B PICK ONE PROBLEM

The problem is ____

____

List ideas about the forces increasing the problem and the forces decreasing the problem.

DO NOT EVALUATE IDEAS AT THIS POINT.

ACCEPT ALL IDEAS.

Forces increasing	*Forces decreasing*

Step C Pick several key forces and begin to generate ideas for reducing or increasing them.

Key force #1 ______________________________

Step D Ways to reduce (increase) force #1:

A_1 ______________________________

A_2 ______________________________

A_3 ______________________________

A_4 ______________________________

A_5 ______________________________

A_6 ______________________________

A_7 ______________________________

A_8 ______________________________

Step E Best alternatives are : ______________________________

Step F For each, implementation plans are:

Who ______________________________

What ______________________________

When ______________________________

How often ______________________________

Check ______________________________

Keep cycling through this process until you have devoted the time you care to. You cannot solve all problems at this time, but you can solve some.

APPENDIX F32

UFB TEAM INSTRUCTIONS FOR DISCUSSING TRAINING TASK #2

Your team task for this class period is to discuss your team experience in working together with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

To achieve this, discuss the points and illustrations contained in the notes which your members made during your last class period. Work to develop a deeper understanding of your members' points of view.

When you have finished, return these directions to the envelope and turn it in to the instructor. Penalty points will be assessed for missing material.

APPENDIX F33

NFB TEAM INSTRUCTIONS FOR CLASS PERIOD FOLLOWING TRAINING TASK #2

Your team task is to use this class period in any way which you as a team think will help you to fulfill the requirements of this course.

Discuss the ideas suggested on the notes which you made last class period, select one, and proceed.

When you have finished, return these directions to the envelope and turn it in to the instructor.

Penalty points will be assessed for missing material.

APPENDIX F34

TRAINING TASK #3

The following exchange focuses on open communications and on the methods for giving and receiving feedback.

The dialogue is between Mike and Paul, two persons from the same work team.

Your task is to analyze the exchange from the standpoint of the communications theory which has been presented in this class. Specifically, you are to do the following:

> In each paragraph, state whether each numbered statement is correct or incorrect according to the theory and explain why. In addition, for each paragraph, describe what the person should be doing differently, if anything, according to the theory.
>
> Note that each paragraph and each statement are numbered. These numbers correspond to those on the answer sheet.

. . .

P1 Mike: "Paul, I'd like to talk with you about our relationship when working together on the team." (s1)
"I think you should pay more attention to what others have to say." (s2)

P2 Paul: "I pay attention. I hear what the others are saying, but I don't agree with them very oftem." (s3)

P3 Mike: "But I'm not talking about when you disagree. I'm saying that you don't pay attention very much even when there's no disagreement. I know this because you are frequently irrelevant." (s4)

P4 Paul: "Oh, I see what you mean." (s5)

P5 Mike: "Good. I feel you've understood part of what I'm saying." (s6)
"Everyone is pretty upset about this behavior of yours." (s7)

P6 Paul: "You're ganging up on me." (s8) "I feel that's unfair." (s9)

P7 Mike: "By ganging up, I imagine you're referring to me saying 'everyone is pretty upset'; is that right?" (s10)

P8 Paul: "Yes, and the fact that you talk about me whenever I'm not around." (s12)

P9 Mike: "Well, I can see that you're not able to talk this through right now." (s13)

Mike and Paul then walk away from each other.

Scoring

If you correctly state that a sentence is correct or incorrect and the reason is valid, you will earn 2 points. If the reason is invalid, you will earn 0 points. If the answer is incorrect, you will earn 0 points.

If you can raise a valid point or points under what should be done differently, you will earn 2 points.

APPENDIX F35

SCORING OF TRAINING TASK #3

For each paragraph, state whether each sentence is correct or incorrect according to the communications theory and explain why using terms from the theory (other terms will not be considered). In addition, in the space provided, state explicitly in terms of the theory what the person should have done differently, if anything. Note that you are asked to explore only through paragraph 7.

Paragraph 1

s1 Correct: this is a contract offer. It should occur immediately.

s2 Incorrect for several reasons: (1) There is no contract yet. Thus, feedback is improper. (2) The statement contains an unchecked inference. (3) The statement is solution oriented and is advice-giving, both blocks at this stage. (4) The statement does not describe behavior nor state feelings directly.

Different: Do not begin feedback until Paul says o.k. Describe a specific situation and state feelings.

Paragraph 2

s3 Incorrect: Paul should paraphrase at this stage; the rational response does not help to clarify Mike's message.

Different: Paul should paraphrase or perception check.
Paul should also accept or refuse the contract.

Paragraph 3

s4 Incorrect: contains an unchecked inference, e.g., that Paul doesn't pay attention. Also, is not specific, e.g., you are frequently irrelevant. Also, timing is not very close to the time of the problem.

Different: Should be descriptive of a specific event.
Should also paraphrase and perception check Paul.

Paragraph 4

s5 Incorrect: assumes that he understands without having checked in his own words.

Different: Should paraphrase or perception check.

Paragraph 5

s6 Incorrect: Not an expression of feelings. Assumes understanding without paraphrasing or further clarification.

s7 Incorrect: Indirect expression of feelings, expressing feelings for others, e.g., "everyone is upset." Also contains an inference about others' feelings.

Different: State own feeling directly.

Paragraph 6

s8 Incorrect: Unchecked inference, blaming message.

s9 Incorrect: Not a statement of feelings. Rather, an evaluation.

Different: State feelings directly. Be descriptive about specific event. Possibly paraphrase or perception check.

Paragraph 7

s10 Correct: Paraphrase.

APPENDIX F36

SFB TEAM INSTRUCTIONS FOR CLASS PERIOD FOLLOWING TRAINING TASK #3

Team Number ______________

Each group, through its experiences together, develops both formal and informal rules as to how members and the group should behave. For example, some teams may have discussed and formally adopted the rule that all task points are evenly distributed among those members present for the task, regardless of the variation in member contribution to task achievement. In other groups this may be an "informal" rule--one that has never been explicitly discussed, but nonetheless is understood by most or all team members and governs their behavior when the time comes to distribute task points. In yet other groups, "rules" may have been adopted which govern how task points are to be distributed differentially among the members according to some criteria of degree of contribution to task achievement.

Other examples of possible "rules" are

- we should not challenge or question each others' behavior directly in the team
- we should make all our decisions by consensus
- you should tell other people what they want to hear, rather than what you really think
- we should not spend time in meetings on emotional matters which are not strictly germane to the task
- everyone should speak out in the group without waiting to be asked for their opinion

Such "rules"--whether they be formal or informal--do develop in groups and affect both group and member behavior. This task is to identify those rules that have developed in your team and to assess whether they

1. contribute to team effectiveness
2. have no bearing on team effectiveness
3. inhibit team effectiveness

Individually write down the "rules," both formal and informal, that are present in your team in relation to the team dimensions listed.

Place a (+) beside those "rules" that in your opinion contribute to your team effectiveness, a (0) if the rule has no bearing on your team effectiveness, and a (-) if you feel the "rule" inhibits your team effectiveness.

When all members of your team have done this individually, discuss the "rules" together.

1. Communication
2. Conflict
3. Use of communication skills
4. Openness
5. Maintenance roles
6. Decision making

Other "rules" that our team has developed (both formal and informal).

APPENDIX F37

UFB TEAM INSTRUCTIONS FOR CLASS PERIOD FOLLOWING TRAINING TASK #3

Your team task for this class period is to discuss your team experience in working together with a view to both developing a better understanding of team effectiveness and to improving your team functioning.

The following steps are designed to help you achieve these objectives:

1. Individually, without discussion with other team members, jot down those points, together with illustrations from your sessions, which you feel should be discussed in order to achieve this session's objectives.
2. As a team, discuss the points and illustrations. Work to develop a deeper understanding of your members' points of view.
3. When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F38

NFB TEAM INSTRUCTIONS FOR CLASS PERIOD FOLLOWING TRAINING TASK #3

Your team task is to use this class period in any way which you as a team think will help you to fulfill the requirements of this course.

Before discussing this with your team, jot down your personal ideas about how you think this time should be used. Next, discuss your team members' various ideas--select one and proceed with it.

When you have finished, return these directions to your team envelope and turn the envelope in to the instructor. Penalty points will be assessed to those teams failing to return all material distributed in the envelopes.

APPENDIX F39

POST-TEST TASK #1, DESERT SURVIVAL PROBLEM

General Instructions

You are now beginning a 25 minute period during which you are to work as an individual in silence. Over the next 25 minutes, first read these instructions carefully and then proceed with the first part of the task.

Overall Task

You are to complete two answer sheets for the desert survival problem. A description of the problem and the answer sheets follow.

You have 25 minutes to read these instructions and to work on this task as an individual.

Then, your team will have 55 minutes to work on this task together.

Only the answers given by the team as a whole will count toward the team mark.

However, each individual is responsible to complete and sign an individual answer sheet which must be turned in.

The team answer sheet will not be passed out until the 25 minutes are up.

Following the completion of the team task, teams will turn in their team answer sheet and receive further instructions which they must follow before this task is complete.

Rules During this 25 Minutes Period for Individual Work

1. There is to be no talking during this period.
2. Each individual on the team is to take two copies of the Desert Survival Answer Sheet.

3. No course materials or notes or blank scratch paper may be on the work surface or within view. Only the task materials themselves may be on the work surface.

4. Each individual is to complete one copy of the Desert task by the end of this 25 minute period and place it in the envelope marked INDIVIDUAL ANSWERS. The answer sheet must be fully complete. However, there will be no individual or team marks based on these answer sheets.

5. When all individuals have completed the individual Desert task, as indicated by them each placing one copy fully completed in the envelope marked INDIVIDUAL DECISIONS, one team member may then bring the envelope forward and pick up the envelope marked TEAM DECISION which contains the team decision communication task. (It is the same task, but is to be done as a group).

6. Teams may not turn in their individual decisions or pick up the team decisionsheet until the 25 minutes are up.

Rules for the 55 Minute Period for Team Decision Making

1. Talking is permitted.

2. Same rules as above for materials on the desk or within view.

3. By the end of the 55 minute period, each team is to write in answers on the sheet marked TEAM ANSWERS.

4. ALL materials--the instructions, all copies of the individual task sheets, and the team decisions sheets--are to be placed in the team envelope.

5. This envelope can be turned in before the 55 minutes are up.

There will be a penalty for each violation of these rules.

NOW BEGIN TO WORK ON THE INDIVIDUAL ANSWER SHEETS.

. . .

Desert Survival Problem[1]

The Situation

It is approximately 10 a.m. in mid-July and you have just crash-landed in the Sonora Desert in southwestern United States. The light twin-engine plane containing the bodies of the pilot and the co-pilot has completely burned. Only the air-frame remains. None of the rest of you have been injured.

The pilot was unable to notify anyone of your position before the crash. However, ground sightings taken before you crashed indicated that you are 65 miles off the course that was filed in your VFR Flight Plan. The pilot had indicated before you crashed that you were approximately 70 miles south-south-west from a mining camp which is the nearest known habitation.

The immediate area is quite flat and, except for occasional barrel and saquaros cacti, appears to be rather barren. The last weather report indicated that temperature would reach 110°--which means that the temperature within a foot of the surface will hit 130°. You are dressed in light weight clothing--short-sleeved shirts, pants, socks and street shoes. Everyone has a handkershief. Collectively, your pockets contain $2.83 in change, $85.00 in bills, a pack of cigarettes, and a ballpoint pen.

In addition, the information contained in the tables below has survived the crash.

TABLE I

SURVIVAL TIME IN DAYS FOR VARIOUS TEMPERATURES
WITH VARYING AMOUNTS OF WATER

Daily Temperature in Shade at °F		Amounts of Water			
	No Water	1 Qt.	2 Qts.	4 Qts.	10 Qts.
No physical activity					
120°	2 days	2	2	2.5	3
110°	3	3	3.5	4	5
100°	5	5.5	6	7	9.5
Walking at night, resting in day					
120°	1	2	2	2.5	3
110°	2	2	2.5	3	3.5
100°	3	3.5	3.5	4.5	5.5

---

[1] Developed by Lafferty, et al. (1973).

TABLE II

PHYSIOLOGICAL EFFECTS OF DEHYDRATION AT VARYING PERCENTAGES OF LOSS OF BODY WEIGHT (WATER)

	1 to 5% loss in body weight	6 to 10% loss in body weight	11 to 20% loss in body weight
Effects of Dehydration	Thirst Impatience Flushed Skin Sleepiness No Appetite Increased pulse	Dizziness Headache Inability to Walk Indistinct Speech Cyanosis Decreased blood Volume	Delirium Spasticity Deafness Dim Vision Inability to Swallow Probable Death

The Problem

Before the plane caught fire, your group was able to salvage the 15 items listed on the answer sheet. Your task is to rank these items according to their importance to your survival starting with "1" for the most important to "15" for the least important.

You may assume that the number of survivors is the same as the number on your team and the team has agreed to stick together.

Answer Sheet, Desert Survival Problem

Team No. ________________

1. Rank order the following 15 items according to their importance to your survival, starting with "1" for the most important to "15" for the least important.

____ flashlight (4 battery size)

____ jack knife

____ sectional air map of the area

____ plastic raincoat (large size)

____ magnetic compass

____ compress kit with gauze

____ .45 caliber pistol (loaded)

____ parachute (red and white)

____ bottle of salt tablets (1,000 tablets)

____ 1 quart of water per person

____ a book entitled, Edible Animals of the Desert

____ a pair of sunglasses per person

____ 2 quarts of 180 proof vodka

____ 1 top coat per person

____ a cosmetic mirror

APPENDIX F40

CORRECT ANSWERS TO DESERT SURVIVAL PROBLEM

1. Rank order the following 15 items according to their importance to your survival, starting with "1" for the most important to "15" for the least important.

4 flashlight (4 battery size)

6 jack knife

12 sectional air map of the area

7 plastic raincoat (large size)

11 magnetic compass

10 compress kit with gauze

8 .45 caliber pistol (loaded)

5 parachute (red and white)

15 bottle of salt tablets (1,000 tablets)

3 1 quart of water per person

13 a book entitled, Edible Animals of the Desert

9 a pair of sunglasses per person

14 2 quarts of 180 proof vodka

2 1 top coat per person

1 a cosmetic mirror

APPENDIX F41

CALCULATION OF TEAM PRODUCTIVITY VIS À VIS PRODUCTIVITY OF MOST ACCURATE MEMBER

If a team's score was the same as that of their most accurate member's score the team was assigned a score of 100. If the team's score was more accurate than their best member, i.e., they achieved an assembly effect bonus, the number of points by which they were better was added to 100 and the team was assigned the resultant sum. The amount of the discrepancy between the team score and the most accurate member for those teams who failed to surpass or equal their best member's score was subtracted from 100.

It was inferred that teams scoring 100 or over on this system were making maximum use of the member resources available to them and that this was a reflection upon their interactions and working relationships. In the sense that making maximum possible use of available resources reflects effective productivity, teams scoring over 100 were judged to be more productive than those scoring under 100.

APPENDIX F42

POST-TEST TASK #2, LEGO CONSTRUCTION TASK

Your team task is to assemble your lego pieces exactly like the model which is in the centre of the room.

The goal is to correctly assemble the pieces in as short a time as possible.

This task is to be completed by the time noted on the blackboard. However, within this constraint you are free to spend whatever time you wish preparing to assemble your pieces.

Rules for Task

1. Only one person may leave your team site at a time to look at the model. The model may not be handled in any way. The pieces which you are to assemble may not be removed from your team site.
2. You may remove your lego pieces from your bag during your planning period. However, no more than two pieces may be fitted together at any one time. All pieces--none of which are to be stuck together--are to be returned to the bag prior to assembly.
3. When you are ready to start assembling, you should advise one of the instructors so that he can clock the time.
4. When you are finished assembling, the instructor will record the time. However, he will not tell you the time until all team times are in.
5. When you have assembled your model, take it to the front desk where a checker will determine whether the assembly has been properly put together.
6. If the checker finds an error when the assembly is completed, he will advise your team that the model is not correct, but he will not tell what the error is. Timing will be started again, adding to the original time.

7. Remember, within the time constraint noted on the blackboard, you can have all the time you want to prepare as a group for the assembly.

   BE SURE TO NOTIFY THE INSTRUCTOR WHEN YOU ARE READY TO BEGIN ASSEMBLING.

Lego Inventory

11 red 8's
6 red 4's
1 red peg

12 white 8's
6 white 4's
1 white peg

3 red 6's
3 red 2's

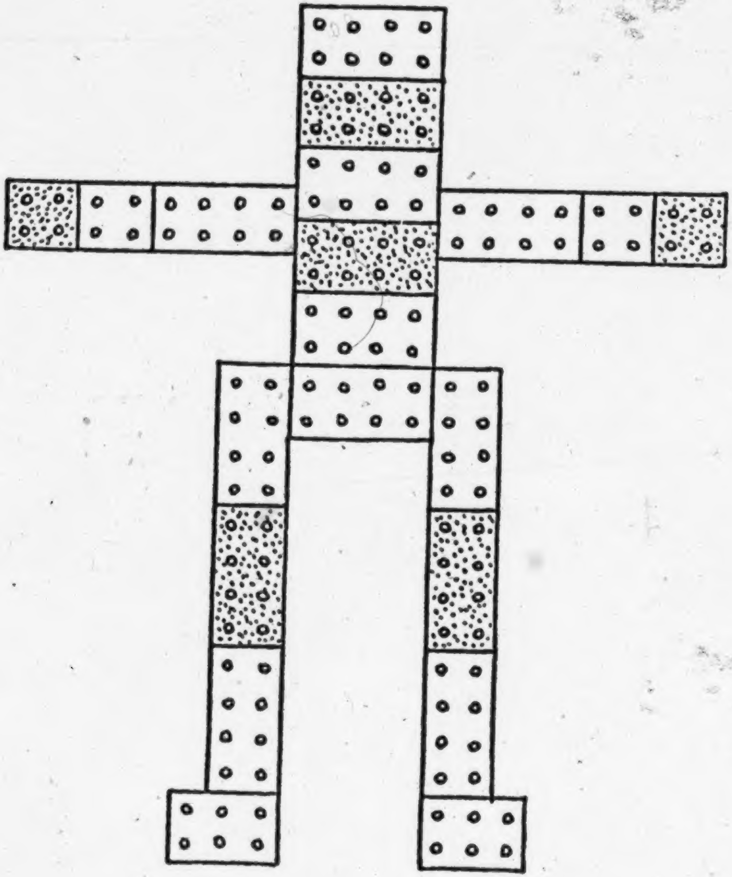
2 white 6's
3 white 2's

When your task is fully completed, return the lego pieces to the bag, this paper to your team envelope, and turn both in to the instructor. PENALTY POINTS WILL BE ASSESSED FOR MISSING MATERIAL.

A second envelope will be handed out when your lego task is complete.

APPENDIX F43

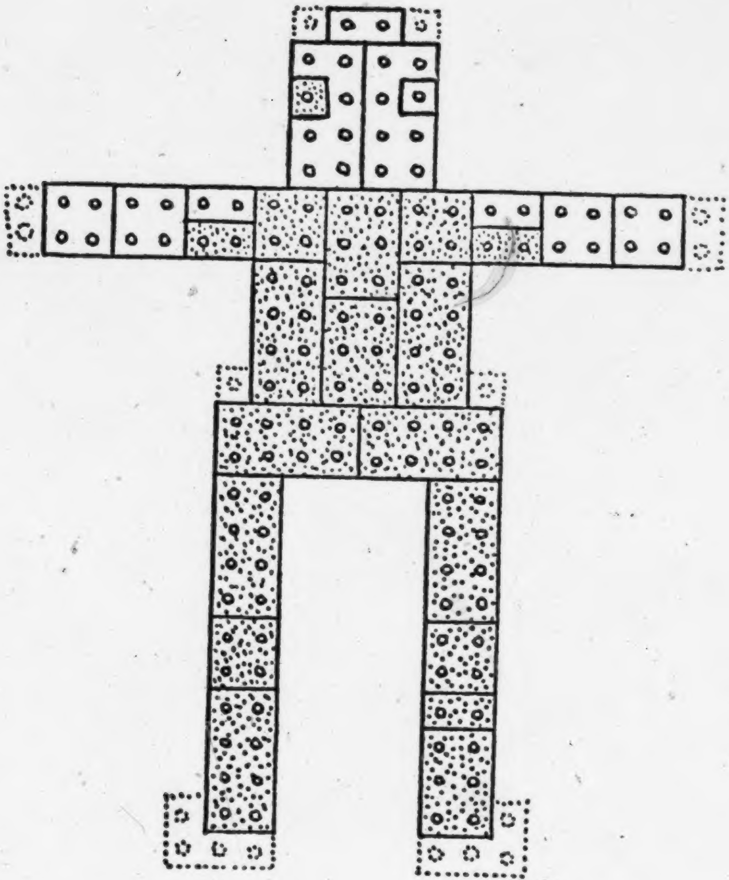
BASE LAYER OF LEGO MAN[1]



---

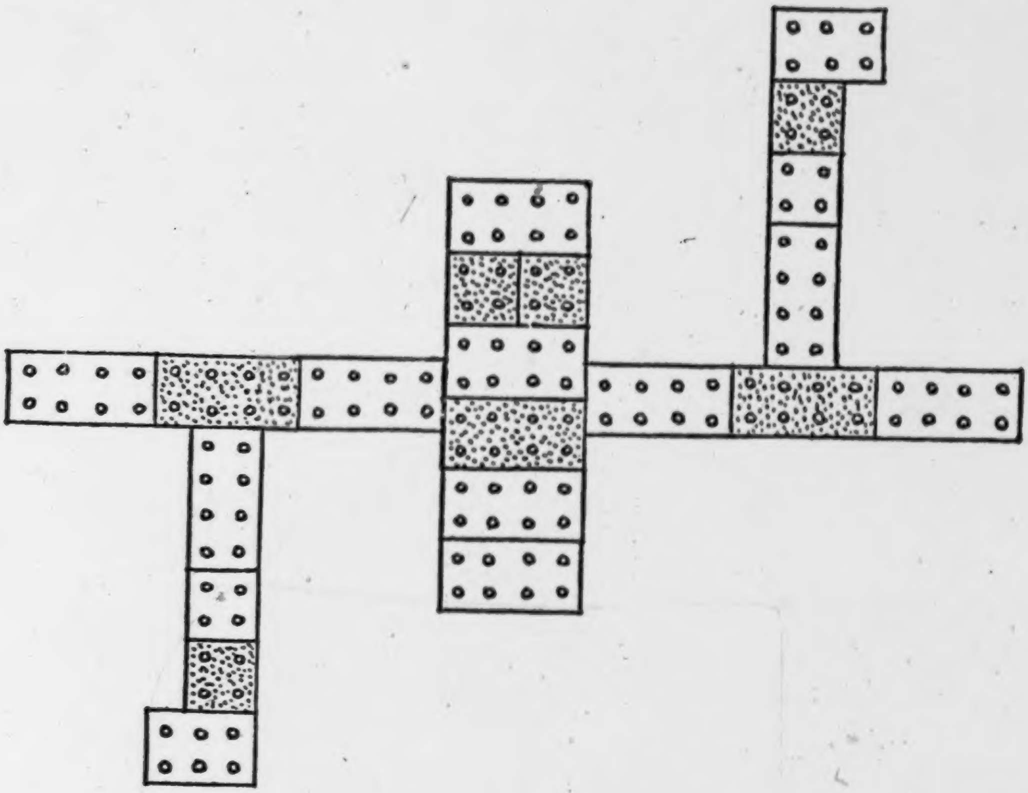
[1] Lego Man exercise developed by Reddy and Kroeger (1972).

TOP VIEW OF COMPLETED LEGO MAN SHOWING
TOP LAYER IN SOLID LINES

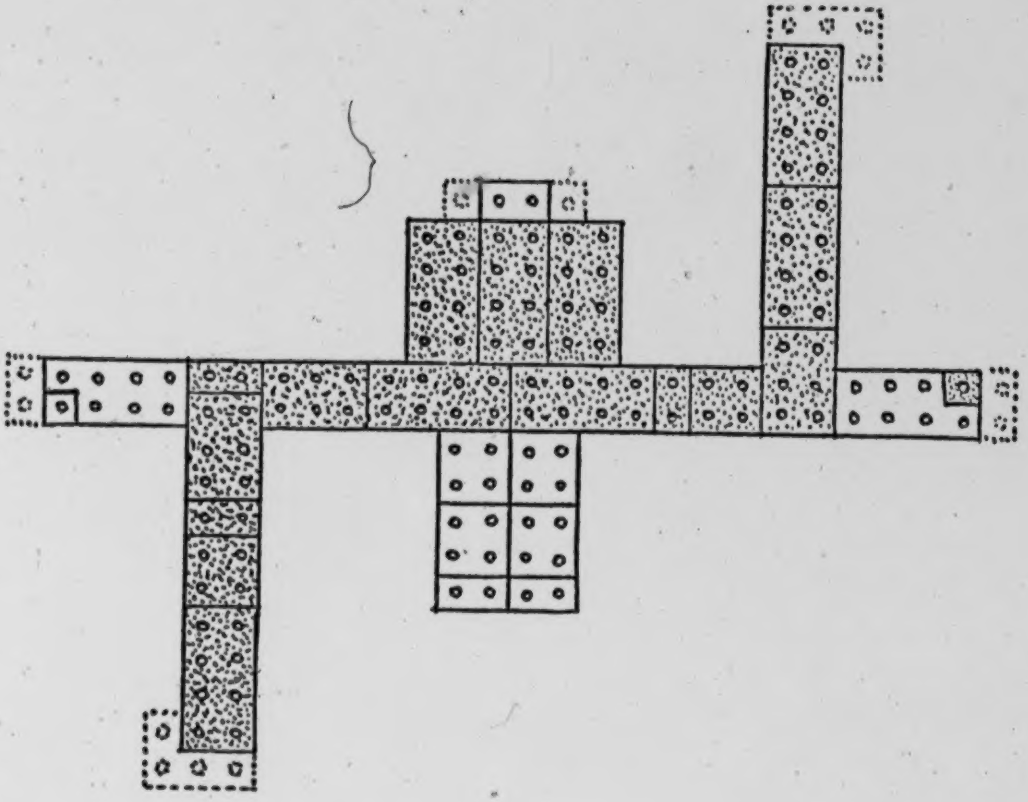


APPENDIX F44

BASE LAYER OF LEGO FIGURE



TOP VIEW OF COMPLETED LEGO FIGURE
SHOWING TOP LAYER IN SOLID LINES



APPENDIX F45

LEGO MAN SCORING SYSTEM USED IN ANALYSIS COMPARING EXPERIMENTAL AND COMPARISON TEAMS

Assembly time in Seconds	Score Assigned
0 - 99	1
100 - 199	2
200 - 299	3
300 - 399	4
400 - 499	5
500 +	6

Planning Plus Assembly Time in Minutes	Score Assigned
0 - 39	1
40 - 49	2
50 - 59	3
60 - 69	4
70 - 79	5
80 +	6

APPENDIX F46

POST-TEST TASK #3, IMPROVING SUPERVISION TASK

Your team, Probsolv Inc., has once more been called upon by the Bigtown Operations Director of Peerless Corp. to solve a problem.

The background information on this operation has been enclosed.

Your task is to solve this problem, return all material to your team envelope, and turn the envelope in to the instructor by the time noted on the blackboard. (Penalty points will be assessed for missing material.)

One of the Operations Director's pressing problems is inadequate supervision of the staff. He'd like to supervise the day-to day operation himself, but he doesn't have enough time to do it effectively. His predecessor tried to operate that way and it obviously didn't work. What the operation really needs is good quality, full-time supervision. This need will become more acute, of course, as the staff expands.

There are a number of approaches he can take. One would be to promote Bill Buttons to Supervisor; he has been functioning as the Expediter. Bill is very familiar with all the personnel and has a good working knowledge of each job in the shop. Bill has been with this operation for eight years now and is well liked by everyone. He's had no supervisory experience per se, but one of the requirements for his present job is to "work through" other people. He's sincere, reliable, and would certainly like to get the raise that goes with the job. A promotion of this kind would require a $3,000 raise and a move to Grade 4. The evaluation of Bill by the Operations Director, after a recent interview, was summarized as follows: "Bill seems very friendly and cooperative and quite happy with his job. He feels his greatest strengths are his knowledge of the business and ability to get along with people. He's 49, married with one child. Doesn't have definite career goals; prefers to remain flexible."

Another option would be to have the home office personnel department provide a suitable candidate. Since they are constantly evaluating all promotable people, they have a reservoir of supervisors on hand. At the Operations Director's request, they recently screened out Pat Hedden who is functioning as an Assistant Supervisor at a large and successful operation 2,000 miles away. Pat is 40, a good family man, and comes well recommended. The Operations Director met him a few weeks ago at a meeting and was impressed by his credentials, personality, and ambition. If

Pat is chosen as Supervisor, there will be a sixty day wait. He'll need that much time to wrap up business and personal problems and relocate. Bigtown will have to assume half of his $2,000 relocation expense. Since he's already at the supervisory level (Grade 4), he'll require a raise from $11,500 to $13,500 for the new assignment.

The third alternative available would be to hire a man locally. There's a chance that one might find a competitive supervisor available who could be hired away. This is not certain, however, because (1) there are not too many competitors, and (2) none of them operate exactly the way Peerless does. Chances are one would have to hire a manager or supervisor in a related field--there are probably some good ones in the area. He would require training so that he's familiar with the nuances of the business. It is estimated that the recruiting, hiring, and training would take 50 per cent of the Operation Director's time for the next three months. Assuming that the right man could be found, he would start at $11,500.

What choice would you recommend to the Operations Director? Rate each course of action and record your team's recommendations on the answer sheet.

. . .

TEAM ANSWER SHEET

Team No. _________

Record your team's recommendations by placing a "1" beside the best solution, a "2" beside the second best, and a "3" beside the least satisfactory solution.

______ Promote Bill Buttons

______ Hire Pat Hedden

______ Hire Locally

Copyright 1972--Education Research

APPENDIX F47

CORRECT[1] ANSWERS TO POST-TEST TASK #3

__2__ Promote Bill Buttons

__1__ Hire Pat Hedden

__3__ Hire Locally

---

[1] Correct answers were defined as those supplied by the authors of the Decision-Making Task.

APPENDIX F48

POST-TEST TASK #4

During the first half-hour you will watch a film[1] on the subject of human motivation.

Following this film, you will be asked as a team to respond to a set of questions which will measure your ability to recall the information presented in the film and to apply the ideas on motivation in a way which demonstrates your learning.

You may utilize this piece of paper for taking notes. However, this piece of paper must be turned in, in your team envelopes, at the completion of the task.

No other paper may be visible during the film or during the task unless it is distributed by the instructor.

The film will take approximately ½ hour. You will have the remainder of the class period to work on the task.

. . .

Herzberg has made a distinction between kitas and real motivators.

In the time available, list as many kitas acting in the present course (Org. Theory 303) as possible.

For each, explain carefully why the factor is a kita.

Be sure to number each kita (e.g., #1, #2).

---

[1] "Kita, or what have you done for me lately?" (Hertzburg, 1969).

Scoring

	Points
Factor is clearly described	1
Factor is not clearly described or is not a kita	0
Explanation is clear and correct	2
Explanation is not clear but is somewhat correct	1
Explanation is incorrect	-1

APPENDIX G

APPENDIX G

TERM PAPER

Purpose

This project is intended to be a team effort. This does not mean that teams are expected to write a paper as a group. It is expected, however, that teams which are successful in sharing ideas about the readings and teams which find successful methods for co-authoring a paper are likely to do far better on the project than teams which assign the task to one or several members.

In order to encourage participation in the sharing of ideas and in producing a well written paper, the payoff in marks will go to the team as a whole to be divided as the team sees fit.

This project is also designed to provide team members with more practical experience in working on decision-making tasks with other persons. In this way, persons should be able to produce better results both in their present teams and in the teams which they will change to later in the course.

Thirdly, this task is designed to provide the student with insights and information about common group issues which are probably affecting their team's productivity. These insights and information could, in turn, lead to increased know how in managing the team for the remaining eight tasks which account for 2750 points or 60% of the total mark in the course (the first tasks were worth a total of 250 points or about 6% of the total mark).

Points

THIS PROJECT IS WORTH A MAXIMUM OF 1500 POINTS (33% of the course mark).

Marks will be administered as follows:

Papers judged to be:	*Points:*	*Approx. Mark*
Excellent, Outstanding	1500	9
Very Good	1300	8
Good	1000	6,7
Fair	700	4,5
Passing Only	300	2,3
Not Acceptable	0	1

Assignment

Based on the readings listed below, prepare a paper containing three sections.

Section I: What forces can be identified which affect people in social or group settings? Put another way, in what ways are people controlled in groups? How would these factors potentially affect group effectiveness? Be sure to use specific illustrations of the points you make from the literature you read. It could also be useful to provide specific anectdotal experiences from your own task group which serve to illustrate the points from the readings or to argue against these points.

Section II: What specific ideas are mentioned in the readings which can be used to increase team productivity? Be specific as to what the research actually says.

Section III: What methods of training are utilized to promote overall team effectiveness? You can use as an example the training provided in the course, or the training suggested in Schein, Process Consultation, or both. What are the impacts of the training on individuals in the class and on the team as a whole? Is the training effective or ineffective? Why? How does the training relate to the information in sections I and II? In all answers use specific examples to illustrate your points.

Reading List

1. Available in packets at Bookstore and at the Reserve Book Room, under O.T. 303, Ford/Rasmussen.

Schachter, S. Deviation, Rejection, and Communication.

Wallach, M., Kogan, N., and Bem, D. J. Group influence on individual risk taking.

Slater, P. E. Role differentiation in small groups.

Milgram, S. Behavioral study of obedience.

Mehrabian, A. Communication without words.

Adams, J. S. Toward an understanding of inequity.

Roy, D. Quota Restriction and Goldbricking in a Machine Shop.

Roy, D. Banana Time.

Coch, L., and French, J. R. P., Jr. Overcoming Resistance to Change.

Collins, O., Dalton, M., and Roy, D. Restriction of Output and Social Cleavage in Industry.

2. Available at the Reserve Book Room.

Hall, Decisions, Decisions in Psychology Today.

Janis, Groupthink in Psychology Today.

Maier, N. R. F., and Hoffman, L. R. Quality of First and Second Solutions in Group Problem-Solving.

Maier, N. R. F., and Solem, A. R. Improving Solutions by Turning Choice Solutions into Problems.

Hoffman, L. R., Burke, R. J., and Maier, N. R. F. Participation, Influence, and Satisfaction Among Members of Problem-Solving Groups.

Maier, N. R. F., and Maier, R. A. An experimental test of the effects of developmental vs. free discussions on the quality of group discussions.

Homans, G. C. The bank wiring observation room in The Human Group, Chapter 3.

Festinger, L., Schachter, S., and Back, K. The operation of group standards.

Berkowitz, L. Group Standards, Cohesiveness, and Productivity.

Asch, S. E. Effects of Group Pressure on the Modification and Distortion of Judgments.

Festinger, L.; Pepitone, A.; and Newcomb, T. Some consequences of deindividuation in a group.

Maier, N. R. F., and Solem, A. R. The contribution of a discussion leader to the quality of group thinking: the effective use of minority opinions.

Maier, N. R. F. Leadership Principles for Problem-Solving Conferences.

McDavid. Social Learning and Social Control.

Maier, N. R. F., and Hoffman, L. R. Acceptance and Quality of Solutions as Related to Leader's Attitudes Toward Disagreement in Group Problem-Solving.

3. Available at Bookstore under O.T. 303, Ford/Rasmussen.

Schein, E. H. Process Consultation.

APPENDIX H

PAGE

APPENDIX H 1 First Comparison Team Survey 314

APPENDIX H 2 Second Comparison Team Survey 316

APPENDIX H 3 Revised Comparison Team Influence Survey 318

APPENDIX H 4 Third Comparison Team Survey 320

APPENDIX H 5 Fourth Comparison Team Survey 321

APPENDIX H1

FIRST COMPARISON TEAM SURVEY

Circle the position which you feel most closely describes your teams. (CIRCLE ONE)

1. Degree of Mutual Trust

High Suspicion	1	2	3	4	5	6	7	High Trust

2. Degree of Mutual Support

Every Man for Himself	1	2	3	4	5	6	7	Genuine Concern for Each Other

3. Communications

Guarded, Cautious	1	2	3	4	5	6	7	Open, Authentic

4. Team Objectives

Not Understood by Team	1	2	3	4	5	6	7	Clearly Understood by Team
Team is Negative Toward Objectives	1	2	3	4	5	6	7	Team is Committed to Objectives

5. Handling Conflicts Within Team

We Deny, Avoid or Suppress Conflicts	1	2	3	4	5	6	7	We Face Conflicts and "Work Them Through"

6. Utilization of Member Resources

Our Abilities, Knowledge and Experience are Not Utilized by the Team	1	2	3	4	5	6	7	Our Abilities, Knowledge, and Experience are Fully Utilized by the Team

7. Control Methods

Control is Imposed on Us	1	2	3	4	5	6	7	We Control Ourselves

8. Organizational Environment

Restrictive; Pressure Toward Conformity	1	2	3	4	5	6	7	Free; Supportive; Respect for Individual Differences

APPENDIX H2

SECOND COMPARISON TEAM SURVEY

Group No. ___________

This feedback focusses on a variety of points that are of particular interest now that everyone is finished with the first paper.

Let's do another point allocation. Assume that the total amount of influence present in your group equals 100. You are to divide these 100 units among the group members with the person who has the most influence getting the highest number of units, etc. Include yourself in this allocation.

Group Member's Name	Units of Influence

Does your group have a formal (e.g., appointed, elected) leader or chairperson? If so, put a check by that person's name in your list above.

What one thing do you least like about how your group is operating now?

____

What one thing do you most like about how your group is operating now?

____

Suppose your group were to form into subgroups of two persons each. Is there any one person in your group you would really dislike to be paired with?

Circle: YES NO

Is there any one person you would really like to be paired with?

Circle: YES NO

What was the total number of hours your group worked on the first paper?

Hours worked by each individual __________

x no. of members __________ = __________ Total individual hours

+ total hours group net + __________

GRAND TOTAL = __________

APPENDIX H3

REVISED COMPARISON TEAM INFLUENCE SURVEY

The earlier attempt at influence data was not successful (people seemed to have a hard time dealing with it). Let's try again in a somewhat different format. In the first column, write the name of each group member, including yourself. In the second column, rank each member as to the quality of ideas they have provided during the term. In the third column, rank each member as to the extent to which they contributed to dealing with the group's socioemotional problems during the term. In other words, rank each member as to task leadership and socioemotional leadership. Give the person who contributed the best ideas or contributed the most in solving socioemotional problems a "1," the next person a "2," and so on. Include yourself in the ranking. Do the rankings separately--that is, rank the members for task leadership, then rank them for socioemotional leadership.

Group Member's Name	Quality of Ideas Ranking	Socioemotional Contribution Ranking

Finally, some information for me.

Do you think the use of group code names increases Dallas' objectivity in grading the papers? Circle one.

YES NO

Given the nature of the third paper, how feasible and useful will code names be? Check one.

____________ Groups will be recognizable so there is no point in code names.

____________ Groups will be recognizable but code names should be used anyway.

____________ Some (if not all) groups may not be recognizable, therefore code names should be used.

____________ Even if some groups may not be recognizable, there is no point in using code names.

APPENDIX H4

THIRD COMPARISON TEAM SURVEY

Evaluate the overall effectiveness of your group by circling the number which best describes your group.

1	2	3	4	5	6	7
extremely ineffective						extremely effective

Consider how your group was functioning in the third week of the term (i.e., about the time you did the OT group scenarios in class). Consider how it is functioning now. To what extent has the group improved or deteriorated?

1	2	3	4	5	6	7
functioned very much better at the start of the term						is functioning very much better now

Overall, how committed to the group have you been?

1	2	3	4	5	6	7
not at all committed						highly committed

What one aspect of your group (e.g., participation, openness, quality of discussions, etc.) has improved the most since the start of the term?

What one aspect of your group has deteriorated the most (or not improved)?

Is there anything about the group which you would like the group to discuss or focus on, but which you are hesitant to bring up yourself? If so, write it in the space below.

APPENDIX H5

FOURTH COMPARISON TEAM SURVEY

UNIVERSITY OF ALBERTA
FACULTY OF BUSINESS ADMINISTRATION AND COMMERCE

O.T. 303 TEAM SURVEY

Circle the position which most closely describes your feelings.

1. To what extent have other people in your group paid attention to your ideas?

1	2	3	4	5	6	7
very little						very much

2. To what extent have you attempted to get others in your group to pay attention to your ideas?

1	2	3	4	5	6	7
very little						very much

3. How good do you think the group's decisions to date have been?

1	2	3	4	5	6	7
very poor						very good

4. To what extent do you personally feel committed to what the group has done so far?

1	2	3	4	5	6	7
very little						very much

APPENDIX I

PAGE

APPENDIX I 1 Measure of Group Cohesiveness 323

APPENDIX I 2 Post-Test Survey 325

APPENDIX I 3 Scoring of Post-Test Survey 328

APPENDIX I1

MEASURE OF GROUP COHESIVENESS

	Scoring Values[1]
1. Do you feel that you are really a part of your team?	
Really a part of my team.	4
Included in most ways.	3
Included in some ways, but not in others	2
Don't feel I really belong.	1
2. If you had a chance to be a member of a different team in this class how would you feel about moving?	
Would want very much to move.	1
Would rather move than stay where I am.	2
Would make no difference to me.	3
Would rather stay where I am than move.	4
Would want very much to stay where I am.	5
3. How does your team compare with other teams in the class in the way the people get along?	
Better than most.	3
About the same as most.	2
Not as good as most.	1
4. How does your team compare with other teams in the class when it comes to sticking together to get what the team wants?	
Not as good as most.	1
About the same as most.	2
Better than most.	3

---

[1] A single numerical value for each group member was derived by summing his score on each of the five questions. A team cohesiveness score was derived by dividing the sum of all the individual member scores by the number of team members completing the scale.

5. How does your team compare with other teams in the class in the way the people help each other.

	Scoring Values
Not as good as most.	1
About the same as most.	2
Better than most.	3

APPENDIX I2

POST TEST SURVEY

Team Number ________________

The following survey is to be completed individually, without consultation or talking with other team members. When you have completed the survey -- place it in your team envelope and turn it in to the instructor.

The individual answers which you give will be held in strictest confidence -- they will only be used for research purposes and will not be reported back to your team in a manner in which you, personally, can be identified. The answers given will have no bearing upon your course mark.

FOR EACH ITEM, PLEASE CHECK THE MOST APPROPRIATE BOX. DO NOT CHECK MORE THAN ONE BOX. THANK YOU.

1. Do you feel that you are really a part of your team?

☐ Really a part of my team
☐ Included in most ways
☐ Included in some ways, but not in others
☐ Don't feel I really belong

2. If you had a chance to be a member of a different team, how would you feel about moving? (Assume that all teams were to be split up and team members formed into new teams.)

☐ Would want very much to move
☐ Would rather move than stay where I am
☐ Would make no difference to me
☐ Would rather stay where I am than move
☐ Would want very much to stay where I am

3. How does your team compare with other teams in the class in the way people get along?

☐ Better than most
☐ About the same as most
☐ Not as good as most

4. How does your team compare with other teams in the class when it comes to sticking together to get what the team wants?

☐ Not as good as most
☐ About the same as most
☐ Better than most

5. How does your team compare with other teams in the class in the way people help each other?

☐ Not as good as most
☐ About the same as most
☐ Better than most

6. How often, on a weekly average, has your team met together as a full team, outside of class hours?

☐ No times
☐ 1 time or less per week
☐ 2 times or less per week
☐ 3 times or less per week
☐ More than 3 times per week

7. How many hours, on a weekly average, has your team spent together as a full team, outside of class hours?

☐ No hours
☐ 1 hour or less per week
☐ 2 hours or less per week
☐ 3 hours or less per week
☐ More than 4 hours per week

8. As a rule, how much does your team tend to ignore or smooth over differences of opinion when you are working together?

☐ Always
☐ Often
☐ Sometimes
☐ Seldom
☐ Never

9. How much have _you_ felt hurt, angry, frustrated, put down, or blocked while working with your team?

☐ Very much
☐ Much
☐ Some
☐ Little
☐ Very little

10. How much active listening (e.g., paraphrasing, perception checking, asking for clarification or specifics) is done on the whole, by your team?

☐ Very much
☐ Much
☐ Some
☐ Little
☐ Very little

11. How much were team members out to win their own points during your team discussions?

☐ Very little
☐ Little
☐ Some
☐ Much
☐ Very much

12. How satisfied are you, on the whole, with the attention and consideration your team members give to your ideas and feelings?

☐ Very little
☐ Little
☐ Some
☐ Much
☐ Very much

APPENDIX I3

SCORING OF POST-TEST SURVEY

The numerical value assigned to each response appears beside the question.

Items 1 through 5 make up the cohesiveness scale.

Items 6 and 7 assess the amount of time which teams spend together.

Items 8 through 12 are designed to assess the members perceptions of their internal team functioning.

Team scores were derived by summing the individual members scores and dividing by the number of members responding to the item.

In all instances, higher scores were assumed to reflect higher cohesiveness, more team member contact and more "positive" team functioning.

1. Do you feel that you are really a part of your team?

4 ☐ Really a part of my team
3 ☐ Included in most ways
2 ☐ Included in some ways, but not in others
1 ☐ Don't feel I really belong

2. If you had a chance to be a member of a different team, how would you feel about moving? (Assume that all teams were to be split up and team members formed into new teams.)

1 ☐ Would want very much to move
2 ☐ Would rather move than stay where I am
3 ☐ Would make no difference to me
4 ☐ Would rather stay where I am than move
5 ☐ Would want very much to stay where I am

3. How does your team compare with other teams in the class in the way people get along?

3 ☐ Better than most
2 ☐ About the same as most
1 ☐ Not as good as most

4. How does your team compare with other teams in the class when it comes to sticking together to get what the team wants?

1 ☐ Not as good as most
2 ☐ About the same as most
3 ☐ Better than most

5. How does your team compare with other teams in the class in the way people help each other?

1 ☐ Not as good as most
2 ☐ About the same as most
3 ☐ Better than most

6. How often, on a weekly average, has your team met together as a full team, outside of class hours?

1 ☐ No times
2 ☐ 1 time or less per week
3 ☐ 2 times or less per week
4 ☐ 3 times or less per week
5 ☐ More than 3 times per week

7. How many hours, on a weekly average, has your team spent together as a full team, outside of class hours?

1 ☐ No hours
2 ☐ 1 hour or less per week
3 ☐ 2 hours or less per week
4 ☐ 3 hours or less per week
5 ☐ More than 4 hours per week

8. As a rule, how much does your team tend to ignore or smooth over differences of opinion when you are working together?

1 ☐ Always
2 ☐ Often
3 ☐ Sometimes
4 ☐ Seldom
5 ☐ Never

9. How much have you felt hurt, angry, frustrated, put down, or blocked while working with your team?

5 ☐ Very much
4 ☐ Much
3 ☐ Some
2 ☐ Little
1 ☐ Very little

10. How much active listening (e.g., paraphrasing, perception checking, asking for clarification or specifics) is done on the whole, by your team?

5 ☐ Very much
4 ☐ Much
3 ☐ Some
2 ☐ Little
1 ☐ Very little

11. How much were team members out to win their own points during your team discussions?

5 ☐ Very little
4 ☐ Little
3 ☐ Some
2 ☐ Much
1 ☐ Very much

12. How satisfied are you, on the whole, with the attention and consideration your team members give to your ideas and feelings?

1 ☐ Very little
2 ☐ Little
3 ☐ Some
4 ☐ Much
5 ☐ Very much

APPENDIX J

APPENDIX J

TAPE SCORING CATEGORIES

Personal

1. Common social acknowledgment
2. Shows solidarity through raising the status of others
3. Shows tension release, laughs
4. Acknowledges, understands, recognizes
5. Shows agreement, concurrence, compliance
6. Self-analysis and self-questioning behavior
7. Shows tension, asks for help by virtue of personal inadequacy
8. Shows tension increase
9. Shows antagonism, hostility, is demanding
10. Ego defensiveness
11. Reference to the external situation as redirected aggression

Impersonal

1. Gives a procedural suggestion
2. Suggests solution
3. Gives orientation, information, passes communication
4. Asks for opinion, evaluation, analysis, expression of feeling
5. Disagrees, maintains a contrary position

The two categories which Borgotta and Crowther identified as; (1) gives opinion, evaluation, analysis, expresses feeling or wish and, (2) draws attention, repeats, clarifies, were scored either personal or impersonal depending upon the context in which they occurred. If the clarification or opinion concerned a communication which had been scored personal, the clarification or opinion was likewise scored personal and vice versa.

A communication was scored as task-relevant if it related to the assigned task. It was scored as non-task-relevant if it did not.

All interactions were scored so that they fell into one of the following four categories:

A. Task-relevant impersonal

B. Task-relevant personal

C. Non-task-relevant impersonal

D. Non-task-relevant personal

APPENDIX K

PAGE

APPENDIX K 1 Pretest Survey 335

APPENDIX K 2 Scoring of Pretest Survey 338

APPENDIX K1

PRETEST SURVEY

Team Number ________________

The responses you make to this survey will be anonymous.

Please individually rate your team on each of the dimensions below in relation to your experience in working together during the communication task only.

When you have finished place the survey in the envelope marked TEAM SURVEYS and turn it into the instructor.

Do not talk during this exercise.

Procedure:

For each of the scales below, indicate your rating by placing an "x" in the appropriate box. Do not place an "x" above, below, or on the line between boxes. Try to choose the best response you can but work quickly.

E.G.,

Our team tackled the communication task with enthusiasm:

	x			
very much	much	some	little	very little

Now, begin working and please work quickly.

1. How satisfied were you with the attention and consideration your team members gave to your ideas and feelings during the communication task?

very little	little	some	much	very much

2. Our team tackled this communication task with enthusiasm:

very little	little	some	much	very much

3. How even (e.g., similar) was participation among team members while doing the communication task?

very much even	even	somewhat even	uneven	very uneven

4. How much did the team tend to ignore or smooth over differences of opinion?

never	seldom	sometimes	often	always

5. How much did you feel hurt, angry, frustrated, put down, or blocked while doing the communication task?

very much	much	some	little	very little

6. How much blocking behavior (e.g's., getting off the track, being irrelevant, cutting others off, blaming, placating) was there during the communication task?

very little	little	some	much	very much

7. How responsible did you feel for team productivity?

very little	little	some	much	very much

8. How direct were people in giving feedback and in expressing their feelings while doing the communication task?

very little	little	some	much	very much

9. How much active listening (e.g.'s., paraphrasing, perception checking, asking for clarification or specifics) was done during the communication task?

very much	much	some	little	very little

10. When the communication skills were used in our team, the impact was

negative	somewhat negative	neither + or -	somewhat positive	positive

11. How much were team members out to win their own points during the discussion?

very much	much	some	little	very little

12. How much time did your team spend observing and discussing the way it was functioning while doing the communication task?

very much	much	some	little	very little

APPENDIX K2

SCORING OF PRETEST SURVEY

The numerical value assigned to each response appears in the box immediately above the response.

Team scores were derived by summing the individual members scores and dividing by the number of members responding to the item.

1. **How satisfied were you with the attention and consideration your team members gave to your ideas and feelings during the communication task?**

1	2	3	4	5
very little	**little**	**some**	**much**	**very much**

2. **Our team tackled this communication task with enthusiasm:**

1	2	3	4	5
very little	**little**	**some**	**much**	**very much**

3. **How even (e.g., similar) was participation among team members while doing the communication task?**

5	4	3	2	1
very much even	**even**	**somewhat even**	**uneven**	**very uneven**

4. **How much did the team tend to ignore or smooth over differences of opinion?**

5	4	3	2	1
never	**seldom**	**sometimes**	**often**	**always**

5. How much did you feel hurt, angry, frustrated, put down, or blocked while doing the communication task?

1	2	3	4	5
very much	much	some	little	very little

6. How much blocking behavior (e.g's., getting off the track, being irrelevant, cutting others off, blaming, placating) was there during the communication task?

5	4	3	2	1
very little	little	some	much	very much

7. How responsible did you feel for team productivity?

1	2	3	4	5
very little	little	some	much	very much

8. How direct were people in giving feedback and in expressing their feelings while doing the communication task?

1	2	3	4	5
very little	little	some	much	very much

9. How much active listening (e.g.'s., paraphrasing, perception checking, asking for clarification or specifics) was done during the communication task?

5	4	3	2	1
very much	much	some	little	very little

10. When the communication skills were used in our team, the impact was

1	2	3	4	5
negative	somewhat negative	neither + or -	somewhat positive	positive

11. How much were team members out to win their own points during the discussion?

1	2	3	4	5
very much	much	some	little	very little

12. How much time did your team spend observing and discussing the way it was functioning while doing the communication task?

2	2	2	1	1
very much	much	some	little	very little

APPENDIX L

APPENDIX L

MEANS AND STANDARD DEVIATIONS OF SFB, UFB, AND NFB TEAMS ON EXPERIMENTAL MEASURES

Task - Measure	Team Type	Class	Mean	S.D.	Number
Pretest Task #1 Tinker Toys	SFB	E 1	16.0	9.4	4
		E 2	41.8	16.2	6
		E 3	36.5	19.8	7
	UFB	E 1	14.7	5.8	4
		E 2	28.1	17.8	6
		E 3	29.1	20.4	7
	NFB	E 1	36.0	17.0	4
		E 2	11.8	5.7	6
		E 3	45.7	24.4	7
Pretest Task #2 Farming	SFB	E 1	1650	484.8	4
		E 2	1691	498.4	6
		E 3	2392	1027.2	7
	UFB	E 1	2387	517.0	4
		E 2	1766	586.2	6
		E 3	2300	362.5	7
	NFB	E 1	2050	609.8	4
		E 2	2066	511.5	6
		E 3	2114	914.6	7
Pretest Task #3 Communication Quiz Team Scores	SFB	E 1	21.5	1.00	4
		E 2	21.5	1.97	6
		E 3	19.1	3.34	7
	UFB	E 1	19.5	1.91	4
		E 2	22.5	.84	6
		E 3	18.7	3.59	7
	NFB	E 1	20.2	2.50	4
		E 2	22.1	.98	6
		E 3	21.2	2.21	7

Task - Measure	Team Type	Class	Mean	S.D.	Number
Pretest Task #3 Average of Individual Scores	SFB	E 1	12.5	6.16	4
		E 2	15.5	2.07	6
		E 3	10.9	4.93	7
	UFB	E 1	13.6	3.34	4
		E 2	16.8	1.06	6
		E 3	9.1	3.70	7
	NFB	E 1	13.5	4.92	4
		E 2	16.5	2.13	6
		E 3	12.0	3.47	7
Training Task #1 Parasol	SFB	E 1	32.5	5.0	4
		E 2	39.1	4.9	6
		E 3	35.0	10.0	7
	UFB	E 1	36.2	4.8	4
		E 2	30.8	12.8	6
		E 3	28.5	12.1	7
	NFB	E 1	31.2	2.5	4
		E 2	26.6	13.7	6
		E 3	32.8	9.5	7
Training Task #2 A Office Site	SFB	E 1	3.0	1.61	4
		E 2	3.6	2.41	6
	UFB	E 1	5.0	2.83	4
		E 2	2.6	1.48	6
	NFB	E 1	1.5	1.00	4
		E 2	2.0	1.10	6
Training Task #2 B Reproduction	SFB	E 3	3.0	1.63	7
	UFB	E 3	1.5	0.97	7
	NFB	E 3	2.7	0.75	7
Training Task #3 Analysis of interchange	SFB	E 1	22.2	4.49	4
		E 2	20.1	2.12	6
		E 3	23.5	4.68	7
	UFB	E 1	18.7	4.57	4
		E 2	24.3	4.32	6
		E 3	24.0	4.16	7
	NFB	E 1	18.5	5.97	4
		E 2	19.3	5.00	6
		E 3	24.4	2.43	7

Task - Measure	Team Type	Class	Mean	S.D.	Number
Team Paper	SFB	E 1	2.7	1.23	4
		E 2	2.1	1.14	6
		E 3	3.0	1.42	7
	UFB	E 1	3.0	1.42	4
		E 2	3.0	1.10	6
		E 3	2.5	.77	7
	NFB	E 1	3.0	.77	4
		E 2	2.3	1.18	6
		E 3	2.2	.95	7
Post-Test Task #1 Desert Survival Average of Individual Scores	SFB	E 1	66.2	4.53	4
		E 2	67.4	5.42	6
		E 3	64.5	7.48	7
	UFB	E 1	64.7	8.51	4
		E 2	72.5	5.44	6
		E 3	62.6	11.55	7
	NFB	E 1	61.7	3.75	4
		E 2	68.3	9.86	6
		E 3	66.7	6.70	7
Post-Test Task #1 Team Scores	SFB	E 1	58.0	5.16	4
		E 2	53.7	5.99	6
		E 3	54.8	9.23	7
	UFB	E 1	45.5	9.98	4
		E 2	59.0	12.89	6
		E 3	49.6	10.13	7
	NFB	E 1	50.7	13.40	4
		E 2	52.7	10.09	6
		E 3	51.1	16.21	7
Post-Test Task #1 Team Productivity Contrasted With That of Their Most Productive Individual Member	SFB	E 1	97.5	3.78	4
		E 2	91.0	8.27	6
		E 3	94.1	13.53	7
	UFB	E 1	97.5	11.71	4
		E 2	97.6	12.99	6
		E 3	99.8	9.42	7
	NFB	E 1	94.2	7.93	4
		E 2	101.0	9.86	6
		E 3	97.7	9.12	7

Task - Measure	Team Type	Class	Mean	S.D.	Number
Post-Test Task #2 A Lego Man Assembly Time	SFB	E 1	170.5	83.7	4
		E 2	137.2	81.8	6
	UFB	E 1	171.8	26.8	4
		E 2	268.3	175.1	6
	NFB	E 1	224.0	106.7	3
		E 2	163.5	80.0	6
Post-Test Task #2 A Planning Plus Assembly	SFB	E 1	56.8	4.02	4
		E 2	55.4	9.61	6
	UFB	E 1	48.1	9.07	4
		E 2	56.5	9.21	6
	NFB	E 1	62.7	6.96	3
		E 2	56.1	6.72	6
Post-Test Task #2 B Lego Figure Assembly Time	SFB	E 3	185.8	58.8	7
	UFB	E 3	184.8	99.6	7
	NFB	E 3	287.1	159.7	7
Post-Test Task #2 B Planning Plus Assembly	SFB	E 3	58.5	8.58	7
	UFB	E 3	59.1	6.84	7
	NFB	E 3	62.1	6.65	7
Post-Test Task #3 Supervision	SFB-I	E 1+2	2.43	.40	7
	SFB-I	E 3	3.00	1.60	4
	SFB-AH	E 1+2	1.67	1.07	3
	SFB-AH	E 3	1.67	1.15	3
	UFB-I	E 1+2	1.57	.97	7
	UFB-I	E 3	3.00	.00	4
	UFB-AH	E 1+2	3.00	2.00	3
	UFB-AH	E 3	3.00	.00	3
	NFB-I	E 1+2	1.57	.97	7
	NFB-I	E 3	3.00	.00	4
	NFB-AH	E 1+2	1.67	2.04	3
	NFB-AH	E 3	2.33	1.15	3
	SFB		2.29	1.84	17
	UFB		2.41	1.18	17
	NFB		2.06	1.05	17
	Intact		2.27	1.11	33
	Ad Hoc		2.22	2.29	18

Task - Measure	Team Type	Class	Mean	S.D.	Number
Post-Test Task #4 Film	SFB-I	E 1+2	18.7	6.46	7
	SFB-I	E 3	17.7	6.13	4
	SFB-AH	E 1+2	12.6	4.06	3
	SFB-AH	E 3	15.0	7.55	3
	UFB-I	E 1+2	21.7	6.83	7
	UFB-I	E 3	25.0	5.94	4
	UFB-AH	E 1+2	16.3	1.00	3
	UFB-AH	E 3	19.3	10.12	3
	NFB-I	E 1+2	17.1	3.63	7
	NFB-I	E 3	18.2	2.50	4
	NFB-AH	E 1+2	16.3	3.24	3
	NFB-AH	E 3	21.3	5.51	3
	SFB		16.8	6.02	17
	UFB		21.1	5.99	17
	NFB		18.0	3.76	17
	Intact		19.6	5.31	33
	Ad Hoc		16.8	5.74	18
Cohesiveness	SFB	E 1	14.4	2.01	4
		E 2	13.9	1.81	6
		E 3	14.9	1.27	7
	UFB	E 1	14.6	2.01	4
		E 2	14.9	1.94	6
		E 3	14.2	1.48	7
	NFB	E 1	14.5	2.42	4
		E 2	15.8	.97	6
		E 3	14.8	2.73	7
Pretest Survey (Total Survey Score)	SFB	E 1	44.2	1.98	4
		E 2	45.2	1.82	6
		E 3	43.6	2.19	7
	UFB	E 1	45.2	3.04	4
		E 2	46.6	3.34	6
		E 3	41.9	1.72	7
	NFB	E 1	44.3	1.83	4
		E 2	44.9	3.81	6
		E 3	43.2	2.98	7

Test Measure	Team Type	Class	Mean	S.D.	Number
	SFB	E 1	4.75	.64	4
		E 2	4.60	.74	6
		E 3	4.71	.15	7
Pretest Survey	UFB	E 1	4.50	.25	4
		E 2	4.61	.74	6
Question #1		E 3	4.29	.57	7
	NFB	E 1	4.30	.26	4
		E 2	4.60	.28	6
		E 3	4.74	.11	7
	SFB	E 1	4.15	.38	4
		E 2	3.85	.52	6
		E 3	4.16	.19	7
Pretest Survey	UFB	E 1	4.61	.62	4
		E 2	4.37	.56	6
Question #2		E 3	4.13	.74	7
	NFB	E 1	4.35	.13	4
		E 2	4.13	.35	6
		E 3	4.71	.40	7
	SFB	E 1	3.28	.22	4
		E 2	3.88	.80	6
		E 3	3.90	.39	7
Pretest Survey	UFB	E 1	4.15	.30	4
		E 2	4.13	.10	6
Question #3		E 3	3.54	.56	7
	NFB	E 1	3.60	.59	4
		E 2	3.87	.63	6
		E 3	3.30	.22	7
	SFB	E 1	3.68	.59	4
		E 2	3.87	.68	6
		E 3	3.53	.94	7
Pretest Survey	UFB	E 1	3.38	.61	4
		E 2	4.00	.66	6
Question #4		E 3	2.89	.50	7
	NFB	E 1	3.65	.34	4
		E 2	3.57	.73	6
		E 3	3.64	.47	7

Team Measure	Team Type	Class	Mean	S.D.	Number
Pretest Survey Question #5	IFB	E 1	4.60	[illegible]	4
		E 2	4.83	[illegible]	6
		E 3	4.71	.49	7
	UFB	E 1	4.38	[illegible]	4
		E 2	4.77	.52	6
		E 3	4.77	.39	7
	NFB	E 1	4.50	.38	4
		E 2	4.57	[illegible]	[illegible]
		E 3	4.90	[illegible]	[illegible]
Pretest Survey Question #6	IFB	E 1	4.50	.58	4
		E 2	3.58	[illegible]	6
		E 3	3.89	[illegible]	7
	UFB	E 1	4.38	[illegible]	4
		E 2	4.50	[illegible]	6
		E 3	3.89	.78	7
	NFB	E 1	4.25	.44	4
		E 2	3.60	.38	6
		E 3	3.87	[illegible]	7
Pretest Survey Question #7	IFB	E 1	4.13	.50	4
		E 2	3.83	[illegible]	6
		E 3	3.94	.26	7
	UFB	E 1	4.25	.34	4
		E 2	3.83	.39	6
		E 3	3.77	.36	7
	NFB	E 1	3.85	.30	4
		E 2	3.83	.21	6
		E 3	3.87	.34	7
Pretest Survey Question #8	IFB	E 1	4.23	.21	4
		E 2	3.73	.11	6
		E 3	3.99	.34	7
	UFB	E 1	3.95	.30	4
		E 2	4.07	.52	6
		E 3	3.49	.30	7
	NFB	E 1	4.00	.43	4
		E 2	3.73	.59	6
		E 3	3.86	.50	7

Data Measure	Task Type	Class	Mean	S.D.	Number
Pretest Survey Question #9	[illegible]	K 1	1.80	.74	6
		K 2	1.15	.52	6
		K 3	1.00	.51	7
	[illegible]	K 1	1.65	.25	6
		K 2	1.90	.52	6
		K 3	1.71	.70	7
	[illegible]	K 1	1.55	.41	6
		K 2	1.25	.52	6
		K 3	1.80	.60	7
Pretest Survey Question #10	[illegible]	K 1	4.23	.20	6
		K 2	4.00	.64	6
		K 3	4.14	.56	7
	[illegible]	K 1	4.18	.77	6
		K 2	4.13	.67	6
		K 3	3.61	.72	7
	[illegible]	K 1	4.25	.50	6
		K 2	4.23	.51	6
		K 3	4.00	.62	7
Pretest Survey Question #11	[illegible]	K 1	2.71	.22	6
		K 2	1.70	.33	6
		K 3	1.99	.88	7
	[illegible]	K 1	2.93	.76	6
		K 2	1.83	.53	6
		K 3	1.80	.59	7
	[illegible]	K 1	1.25	.62	6
		K 2	1.53	.60	6
		K 3	1.83	.51	7
Pretest Survey Question #12	[illegible]	K 1	1.88	.029	6
		K 2	1.25	.027	6
		K 3	1.59	.014	7
	[illegible]	K 1	1.20	.001	6
		K 2	1.33	.027	6
		K 3	1.40	.023	7
	[illegible]	K 1	1.50	.020	4
		K 2	1.43	.028	6
		K 3	1.47	.022	7

Task Measure	Team Type	Time	Mean	S.D.	Number
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
Post-Test Survey Question 86	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
Post-Test Survey Question 87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
Post-Test Survey Question 88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
Post-Test Survey Question 89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]	[illegible]

Task Measure	Team Type	Class	Mean	S.D.	Number
		R 1	3.39	.15	4
	[illegible]	R 2	2.85	.42	6
		R 3	3.53	.45	7
Post-Test Survey		R 1	3.35	.38	4
	[illegible]	R 2	3.01	.44	6
Question #10		R 3	2.98	.34	7
		R 1	3.04	.05	4
	[illegible]	R 2	3.18	.45	6
		R 3	3.04	.54	7
		R 1	2.78	.65	4
	[illegible]	R 2	3.21	.51	6
		R 3	3.13	.61	7
Post-Test Survey		R 1	3.32	1.32	4
	[illegible]	R 2	3.88	.99	6
Question #11		R 3	3.51	.53	7
		R 1	3.54	.69	4
	[illegible]	R 2	3.84	.50	6
		R 3	3.87	.50	7
		R 1	3.91	.55	4
	[illegible]	R 2	3.92	.27	6
		R 3	4.44	.16	7
Post-Test Survey		R 1	3.85	.81	4
	[illegible]	R 2	3.85	.39	6
Question #12		R 3	3.93	.83	7
		R 1	4.06	.51	4
	[illegible]	R 2	4.39	.27	6
		R 3	3.97	.65	7